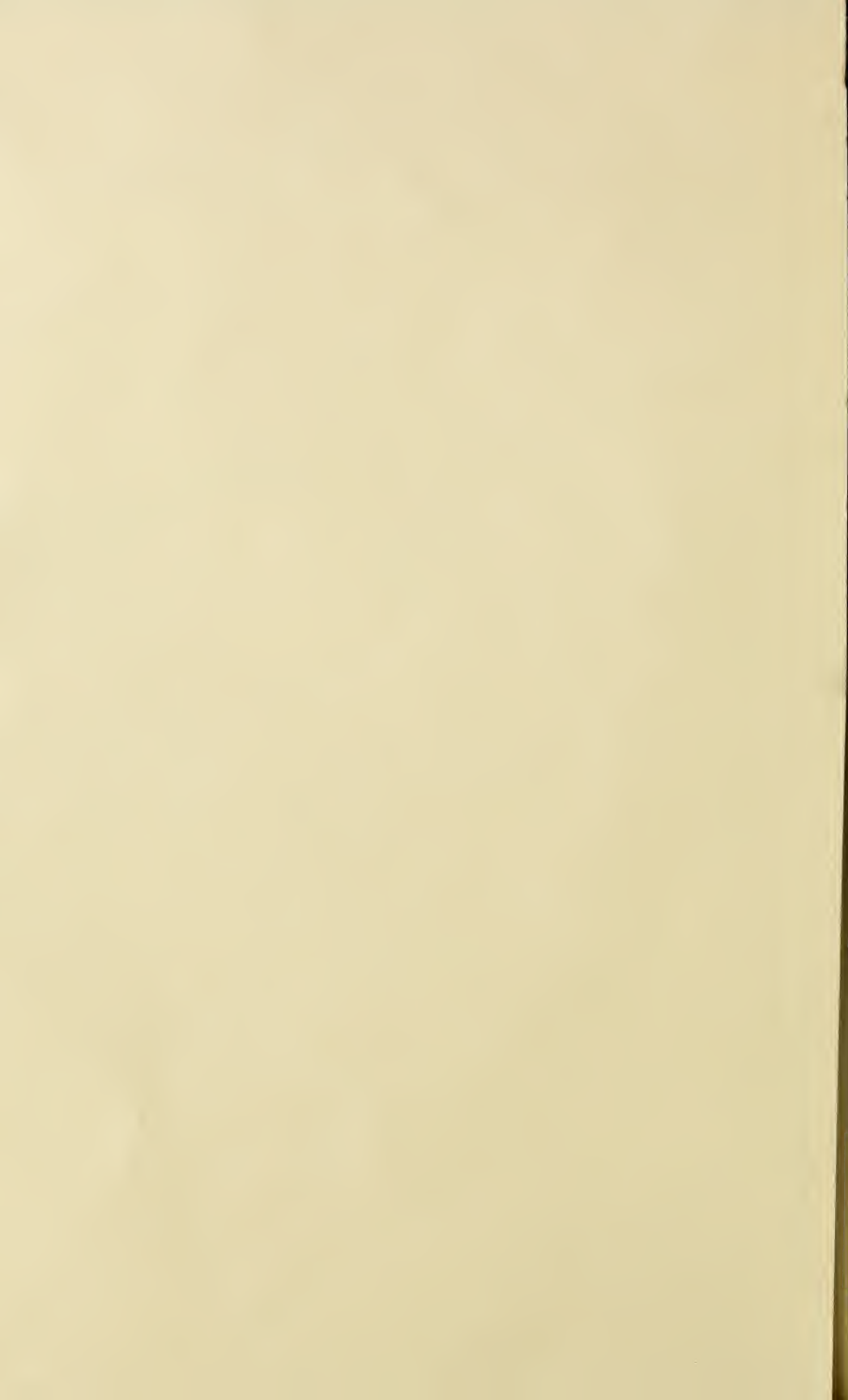


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THE

# MARYLAND FARMER :

DEVOTED TO  
Agriculture, Horticulture, and Rural Economy.

VOL. 8.

BALTIMORE, JANUARY, 1871.

No. 1.

## OUR PROSPECTS FOR 1871.

It is a subject of self-gratulation to know that our subscription list for the present year has increased so largely, and still increasing. If our friends would only make a slight exertion, our list would be doubled in a short time, and we should thereby be enabled to increase the efficiency of our editorial corps, and add greatly to the value and usefulness of the MARYLAND FARMER. It is our aim to make this journal equal, if not superior, to any Agricultural monthly in the whole country. No effort on our part shall be wanting, and we confidently bespeak the *paying* support of the farmers of the United States, but especially of Maryland, with whose interests we are identified, and to which our journal shall be zealously devoted. In this connection we would remind our subscribers that the terms are *cash*, and what is a trifle to each individual is in the aggregate an important matter to us; for without prompt pay on the part of subscribers we are necessarily embarrassed in rendering the paper what is expected by our friends and what we intend to make it—a paper worthy of the support of enlightened agriculturists, and reflecting credit upon the emporium of Maryland, as the exponent of the interests of the owners of the land, whose toil contributes so largely to the welfare of the city of Baltimore. Identified as is the interests of our great city with the agriculture of the State, our merchants should cheerfully give their aid in support of a first-class Journal devoted to the advancement of that important pursuit, on which all other industries and avocations mainly depend.

Beside the immense quantities of field and garden products brought to this market, from the selling, buying and manufacturing of which thousands derive their sustenance, and often make fortunes, the growers of these products expend with our people nearly all they realize from their sales. The Agricultural Fair and the Races add also immensely to the general welfare and prosperity of our citizens, by attracting thousands of strangers, whose sojourn benefits all classes, directly or indirectly, to a very large amount. Hence it behooves every citizen to foster any enterprise which is designed to promote the prosperity of Agriculture.

## Farmers, Support Your own Paper.

Farmers of Maryland should take a pride in giving a hearty support to the ONLY agricultural magazine in their State. The "MARYLAND FARMER" commences its eighth volume with this number, when every farmer in the State should be enrolled on its books—and can be, by sending us the trifling sum of \$1.50—thereby securing a first-class agricultural book of 480 large octavo pages, treating upon agriculture and its kindred sciences. We are now making an effort to swell our circulation to 12,000 for 1871. Will our friends throughout the country second our efforts by a personal interest in securing subscriptions? Clubs of five and upwards supplied at \$1 each—making it the cheapest, as it is the best, agricultural magazine in the country.

## RENEWALS.

The subscription time of a large number of our readers expired with the December number of the *Farmer*. Money sent in any time during January will be properly credited and subscriptions extended accordingly.

## THE INTERNATIONAL IMMIGRATION ASSOCIATION.

The association which met at Raine's Hall in pursuance of a special call for that purpose, was attended by delegates from all the wards of the city, and nearly all the counties of the State. Gov. Bowie presided, and Messrs. Hoblitzell and Smith were appointed Secretaries. The resolutions adopted were first to disseminate among the people of the State, an address setting forth the views and purposes of the association, and next, to petition the Legislature for an appropriation of two hundred thousand dollars, to carry into effect the purposes for which the association has been organized.

There was evidently some difference of opinion among the delegates present, in respect to the propriety of asking the Legislature for so large a sum; but this resolution was passed under the operation of the previous question. In regard to the advisability of promoting immigration under the auspices of the State, and by means of fitting agents abroad and at home, there was no difference of opinion whatever. But, in respect to the working details of the scheme, much might have been said which would have thrown a good deal of light upon a subject, upon which all were interested; but upon which the delegates themselves were evidently not agreed. The proposition to organise county associations in connection with the central organization was a good one, if it can be efficiently carried out. This however we doubt—the multiplicity of agencies will we fear complicate the operations, which should be as simple and direct as possible. However, it remains to be seen whether it is possible to get up and maintain in these branch associations the necessary vigor to render them useful adjuncts, and also to harmonize the conflicting elements which we fear would thus disturb the action of the main body. Still, the thing is an experiment, and there is no harm in trying it.

But there are other things to be considered. If it is to be understood that the two hundred thousand dollars to be asked of the Legislature, is to be a clear grant of that sum, there is likely to be opposition to it, unless it can be conclusively shown that its expenditure will result in a permanent gain to the State. On the other hand, if the Legislature should agree to advance a certain sum to promote the objects of the association, on the principle of a loan, to be repaid to the State out of the labor of those who may thus be assisted, this reimbursement to be guaranteed by the employers of such assisted immigrants, a much smaller sum would be sufficient for the purpose, if the same process of refunding to the State and reissuing to the association, to assist fresh immigrants were continued from year to year.

In this way too, the State would really be at no other expense than that of agencies, because the remainder of the sum advanced would be paid back to the Treasury whenever the association ceased from its labors, or immigration dropped off.

Again, it is of no use to bring immigrants into the State unless they can either find lands they can purchase at reasonable rates, or employers who will at once receive them as laborers. These two points deserve to be maturely considered; for on their satisfactory solution the success of the movement depends. If, then, the owners of large bodies of lands would agree to throw a part of them into a common stock, at fixed prices, according to location, and bind themselves to sell those lands at the prices specified, and on such terms as will offer inducements for their purchase by immigrants bringing with them some small means and much industry, half the difficulty of promoting immigration to this State will at once be overcome. Moreover, such immigrants will not require State assistance, for they will naturally be of a class capable of paying their own passage money. If colonies were thus formed in our least populated counties, they would constitute *nuclei* around which other immigrants would cluster, and thus the land-owners would find in the increased value of the remainder of their lands an ample compensation for the lower price they agreed to take for those they threw into a common stock with a view to attract immigrants to them.

In respect to men engaged to serve as field laborers on wages, there will certainly be no difficulty in placing them—so also with domestic servants.—But in these cases there ought to be some contract entered into whereby they should bind themselves to remain in the State, and work for the people of the State, for a certain specified time, and not wander off into other States after having their passage paid to Maryland out of the State Treasury. If they determine to go elsewhere, after reaching here, they should not be allowed to do so until they had repaid to the State from their wages of labor, or through the assistance of their friends or countrymen, the entire amount, principal and interest, which the State, through its agents, had advanced for them.

We throw out these hints and suggestions because we believe them to be timely, and because we also believe that some such arrangements must be entered into before immigration can be rendered successful by the Association, or beneficial to the State itself.

Ten farmers in Virginia unite in the statement, that a crop of oats does not take anything from the richness of the soil.



## Our Agricultural Calendar.

### FARM WORK FOR JANUARY.

The opening of a new year is like the opening of a new volume of accounts. The old books recording the operations of the past year are virtually closed, the balance of profit and loss has been struck, and a new point of departure taken. What the new year may bring forth, it is not permitted us to know; but although it is never possible to command success, if the season should prove unpropitious, it is nevertheless within the power of every man to deserve it. It is, moreover, evident, that to energy and perseverance, combined with intelligence and a methodical application of means to ends, almost everything within the range of human capability is possible. Now, in our opinion, there is nothing so well calculated to promote a profitable use of the capital and labor expended on a farm, as a thorough knowledge of the needs of the farm itself, and a wise forecast in providing what is wanted. The winter season, when the out of doors operations of the farm are suspended, is the proper time for making such an investigation, and for laying down such rules for the management of the next season's crops as may best facilitate the work that is to be done. Nor should the comfort of the family during the inclement months, be forgotten. In doors every means should be taken to render the home snug and cosy, and the labor of the inmates as light as possible. Fuel, dry, cut and split, ready for use, should invariably be provided, and in the long winter nights, when the family are gathered about the hearth, a small library of really good and useful books will be found one of the means of passing profitably the hours, and of filling up those gaps in dreary weather, when the duties of the day are over, and the topics of conversation are few.

#### Threshing Grain.

If the grain has not already been threshed out and prepared for market, it should now be gotten ready for sale. If the prices rule lower than they promise to do later in the season, the grain may be stored away ready to take advantage of a rise. If, however, there are apprehensions of a decline, the sooner the grain is sold the better. At present the market price is not what it was expected to be earlier in the season; but by the opening of spring, if the war with France should be brought to a close, or the war now threatening with Turkey should break out, the demand for breadstuffs from abroad will be very large. But these are contingencies, and every farmer must form his own judgment as to the propriety of selling now or holding back.

#### Surface Drains.

Examine the surface in the wheat fields, and clean them whenever choked, at intervals throughout the season.

#### Firewood.

Be sure to have an ample supply of firewood cut and stored away for domestic purposes, where coal is not used. The stock should be large enough to last through the ensuing year. This kind of work can be pursued with advantage during the dry, bracing weather of the winter months.

#### Fencing.

See that the fences are in good order. Good post and rail fences are decidedly the best of any. They last longer, are more cleanly, and add more to the decent appearance of the fields than any other. Fencing stuff may now be felled and cut into lengths suitable for rails and posts, and afterwards hauled to the barn, or sheds, where the posts and rails may be hewed and morticed under cover, ready for use at any future time.

#### Store Hogs.

Continue to feed these carefully, moderately and regularly. Give them occasional supplies of charcoal and rotten wood, and remember that warm sleeping apartments are equivalent to an extra quantity of food without them.

#### Sheep.

For the winter management of sheep, see "Farm Work," last month.

#### Materials for Manure.

We have already urged so frequently the importance of collecting all sorts of rough fibrous material, &c., for the purpose of converting it, with the addition of the manure drawn from the stables and cow sheds, into a valuable compost, that it is scarcely necessary to do more than to refer to our former remarks and suggestions on the subject.

#### Gates.

Wherever there are bars, get rid of them as soon as possible, and substitute gates. Any man of ordinary intelligence can construct a gate, and the spare hours of winter could not be better employed.

#### Fowls.

Fowls kept warmly sheltered during the winter will commence to lay early in the spring, and thus afford the promise of early chickens. To promote laying, the use of bone meal is now strongly recommended. It is cheap, and has been recently tried in various quarters with great success. Keep the floors of the fowl house clean, furnish them with sand and slacked lime and ashes, with occasional messes of fresh meat, cut fine, and with a little grain and a constant supply of fresh water they will amply repay the care taken of them.

**SOAP.**—When preparing to make soap, add a little old soap to the lye and grease. It will much facilitate the labor of the making.

## NOTES AND COMMENTARIES.

BY PATUXENT PLANTER.

**The Labor Question,**

Is one of the most important that the farmers of Maryland have now to deal with. If the labor we have was efficient and reliable it would be nearly sufficient for our requirements. We find it however, worthless, and uncertain and uncontrollable. Much of the fault lies to the charge of the employees. No distinction is made or not a proper difference in amount of wages between the different classes of laborers. The usual price of \$10 per month and board is given to all alike—the industrious and idle, the skilled and the ignorant, the trust-worthy and the unreliable; so he is a man, it seems to be all that is required. There should be a classification of wages; the common field hand, with no repute for excellence in any one branch of labor should be put down to a price corresponding to his deficiencies, while the experienced skillful gardener, coachman, waiter, cook or plowman, with a high character for honesty, and industry and fidelity should be rewarded with higher wages. The employer would in the end be the better off at an average cost of labor about equal to what he now pays, while the employees would have constantly before them the incentive to become worthy in every respect of the higher class of wages. At present there is but little inducement for the negro laborer to strive to improve in his morals or acquire a character for excellence in his line of work, for he beholds the loiterer, the sloven and the dishonest shirker of his work, receiving the same wages as he who is attentive to his duties, skillful and hard-working. This ought to be changed; if the common field hand is worth \$10 per month, the man who is greatly his superior in all things should have \$15 or \$20 per month, and if the latter can be had for \$10, the former ought in justice to his fellow laborer and in justice to the employer be reduced in pay to \$5. It will be admitted that many are now employed at high wages who do not earn their pay and are a draw-back instead of help—all such should be discharged, and it would in the end be better for both master and servant. But this reform cannot be effected by one or a half dozen; there must be concert of action with the employers of a whole neighborhood or county.

Again, it is a great fault with our people that they do not, under our new system, follow the example of the people of the North, and of the farmers of England, in requiring every servant to show his "character certificate" from his last employer, unless a good reason be given, before he is employed.—

Whilst we are adopting a new system let us correct and harmoniously act together in perfecting that system while in its infancy, so that starting right, we will avoid the great trouble hereafter of encountering objections against future reform, as innovations. The importance of this suggestion, as to certificates of character, is too plain to need argument or illustration, only I would add, if such a course was generally followed, we would reduce the wages, of the comparatively worthless, so low, we could afford to increase to a considerable extent, the hire of those who were deserving such reward, by having earned the possession of a high character.

In connection with this matter, I rejoice to see our friends in Anne Arundel has made a move of great importance in the right direction and at the right time. I am also happy to learn it meets the approval of most of her leading men and largest employers. This move was by a convention of the people, declaring "that the welfare of the community imperatively calls upon the farmers, to employ only such laborers as are not combined secretly against our interests and ignorantly against their own."

*Resolved*, That for the purpose of supplying any demand for labor which may arise in this county, we urgently recommend the landholders of Anne Arundel county to form associations in each election district, and to employ an agent for the procurement of laborers.

*Resolved*, That it is expedient that such district associations be organized without delay, and we recommend that the agents employed by them be selected as delegates from this county to the State labor convention which is to assemble in Baltimore on Tuesday, the 13th of December.

*Resolved*, That we earnestly recommend to the district associations that they cease to employ any laborers who remain in affiliation with the so-called leagues, and that they especially discountenance those who have made themselves most conspicuous in such leagues.

This sensible movement is striking the axe to the root—unless broken up by this course or some other more effectual, there is no telling to what disasters and unheard of horrors these secret leagues of ignorant, credulous and superstitious people may lead, governed and directed, as all such leagues are, by vindictive and unscrupulous white men capable of descending to any depth of crime, if its accomplishment would place them unscathed in power or fill their purses. It is important, and it is earnestly hoped, that all the Southern counties, at least, in the State will follow the lead of old Anne Arundel in these wise and prudent measures. We will be recreant in the duty of self preservation and in that of our families, if we now further neglect to protect ourselves. We have the power to do so in a law-abiding and peaceable way, and should do so before we are necessitated to resort to harsher means, by the current of events.



**Labor Convention.**

The State Labor Convention which is to assemble in Baltimore on the 13th of December, (see account of in another column) is looked to with much interest by all classes in the lower counties. It is devoutly to be hoped that its deliberations will lead to the happiest results, in establishing or recommending some uniform rules as to dealing with our colored labor in the matter of hire, and also in introducing a supply of intelligent white labor from abroad, by which the present pressing want may be supplied, and by lessening the demand reduce the price, which is now greatly out of proportion to the price of crops produced by this high and unsteady labor, which under present circumstances we are compelled to employ or let our fields go untilld.—Another wholesome fruit of this convention would be to successfully establish such a system of agencies as to promote immigration on a large scale, not only of laborers without means, but immigrants with some money, who would settle on our lands either as tenants or as owners—men who could buy from ten to one hundred acres of land, build on and stock the same, and thus increase our number of land owners, and bring foreign capital as well as labor in our midst. Men of Europe only want to be reliably informed as to our soil, climate, domestic institutions, products and the ease with which products are placed in the great marts of trade on the seaboard, to induce them to leave their over-populated countries and settle among us where they would be free of all annoyances, except Uncle Sam, who alone is likely to disturb their quietude and peace, and he after all is not so bad, as he is sometimes represented.

**Commissioner of Agriculture.**

Genl. Capron, the accomplished Commissioner of Agriculture, has done much for the advancement of the cause he has so warmly at heart, by his sensible, able and eloquently instructive addresses at the different exhibitions the past autumn. They are models for Agricultural Orators to study and pattern after. They are a mine of wealth for the thoughtful and practical farmers of the great West, and particularly of the South. His suggestions as to the propriety of a diversity of crops, necessity of paying more attention to the production of more meat, from which would necessarily follow larger crops of grain; and the importance of home manufacturing home products in a land unprecedented in its natural advantages for manufactories of every sort for working up our immense resources in the mineral and vegetable products, within our own borders and export these after manufacture instead of before, thereby saving to our people untold millions, are gigantic, yet practical views of the Statesman, that if practiced upon would soon make the South the most wealthy and independant power on the globe.

**MOLD OR HUMUS.**

MARYLAND AGRICULTURAL COLLEGE, }  
December 12, 1870. }

To the Editors of the *Maryland Farmer*:

In the *Maryland Farmer* of the month of December is an imposing article on the subject of Agricultural Chemistry, taken from the *Journal of Applied Chemistry*, which is calculated to mislead and to deceive those who may not have seen or known what has been done in the way of practical agriculture. The author asserts that "of the various earths which serve to make up a fertile soil, that condition of things called 'mold' is of the first importance." And again, in another part of the article, "without it, nothing material can have life." Now, sirs, it is a well known fact, to all travelers, that the soil made of the lava from volcanoes, when it has been exposed to the action of the atmosphere and rains, is one of the most inexhaustibly fertile soils which are known to men! And yet, there is no "mold" or "humus" in this soil—at least, when the first crop is grown upon it. For it is evident to any reflecting mind, that the intense heat, in the crater, must drive off all of the organic matter. It is, also, well known, that plants have been frequently brought to maturity by the system of "water-culture"; that is, by growing the plant with the roots in a solution of water and other solvents, which contained all the ingredients of the plant. And yet, there was no mold in this! We have the authority of Baron Liebig, Wolff, Noble and Siebert, and Birner and Lucanus, for this; and many others might be cited, if it were necessary. How then can it be true, that "without 'mold' nothing material can have life?"

I would not be understood to deny that vegetable mold is useful in agriculture, but simply that it is essential. Mold, and all other forms of decaying vegetable matter, will yield food for plants, but it is because it contains the alkalies and earths, which are taken up in solution by the water of the soil, and by it conveyed into the plant, through the roots. But, if all these alkalies, earths, and other matters, such as sulphuric acid and chlorine, are in the solution, the plant will grow without the "mold" or the "humus." And it is also a fact, that the crops grown on a soil in which there is little or no "mold," will be cleaner, and less subject to the impurities which arise from noxious seeds in the moulding vegetable matter. This can be tested by the use of Peruvian Guano on poor land, or by the use of any other good fertilizer which has no mold in it! The author in the *Journal of Applied Chemistry* must look a little farther, before he indulges in such broad assertions, which are so much at variance with the facts.

Respectfully yours,

A. H.,  
Professor Natural Sciences.

*For the Maryland Farmer.*

### URINE AS MANURE.

To the right understanding of the value of urine as a fertilizing agent, we need to know what it is, and of what it is composed, etc. All are aware that urine is the fluid excrement of mamalia, and is produced by the action of the kidneys on the blood, and is a kind of *caput mortuum* which these glands throw into the bladder. Its richness in fertilizing matter depends upon the food consumed by the animal which voids it, as it consists of the essential elements of the food consumed, in a state of solution; yet the urine of the same animal, fed on the same kind of food, cannot be alike rich at all times and under all circumstances, nor of all animals alike. For instance, a cow giving milk will not void as much, neither will it be as rich, as if she were not in milk. The urine of the cow, not in milk, is richer in organic matter by far than that of any other domestic animal, with the exception of the pig; and considered by the quantity voided, its annual value will greatly exceed that of many pigs. The urine of animals contains the greater portion of the nitrogenized excrement, and is, as a consequence, the most important part. Upon its efficacy, as a manure, is depended the quantity as well as quality of the solid matter it holds in solution, as also upon the rapid changes which the organic part undergoes. Urine collected and preserved alone in tanks, etc., commences, and soon undergoes a change, which, unless it loses a portion of its essential qualities or elements, greatly enhances its value; but of so volatile nature is it, that a considerable portion has escaped, and is lost for immediate effect. How can we save this urine and avoid this waste of its volatile elements, becomes now a vital question? Much is written and said in our agricultural journals, farmers' clubs, etc., concerning saving this excrement, by conducting it into vats, tanks, etc., recommending various ways and means more or less practical. But is there not some cheap yet practical way that can be more generally applicable among farmers, at least? We think there is, and a cheap mode—one applicable alike for all. Urine, in its first state is a caustic, acting upon vegetation similar to caustic potash or lime; this causticity is occasioned by ammonia—caustic ammonia! Now, we wish to render this caustic ammonia mild ammonia, without loss. To change from caustic to mild, the urine must rot—undergo fermentation—and in this process there is an exchange of elements, some being drawn from other sources, while others are thrown off, and unless some substance for which they have an affinity is ready to absorb them, they escape in the air, etc., and are lost. Now, there is no substance that has

a stronger affinity for ammonia, or will absorb greater quantities of it, and of so cheap a nature as dry earth, mold; this will afford the necessary carbonic acid in changing the caustic, to mild ammonia, without loss. We now come to the mode and application of this principle. Every farmer should have suitable shelters under which to store his manure without exposure to the out-door elements; he should then provide suitable quantities of dry mold—earth—according to his stock kept, under cover, and place it daily in his stables, sufficient to absorb all the liquids—this can be re-used, if necessary, by drying—and when cleaned from the stable let it be mixed with the solids, and kept under cover till ready to be applied to the soil. Here the urine undergoes its essential changes, becomes a most efficacious manure, and being mixed with the earth and the solid excrements, etc., the whole mass is greatly improved. The dry earth forms a peculiar chemical compound with the ammonia, and while it does not render the mold an easily dissolved matter, yet it holds the ammonia with so feeble force that it easily yields it to growing plants. It only yields its stored ammonia at the time and place it is most wanted.

J. IARDINIERE.

**SPECIAL MANURES FOR POTATOES.**—Dr. Augustus Voelker of England, during the last year, has reached valuable conclusions as to the application of manure to potatoes. He sums them up in *The Journal of the Royal Agricultural Society*:

1. The greatest increase came from the application to an acre of 400 pounds of mineral superphosphates, 200 of potash salts, and 200 of sulphate of ammonia.
2. Dung did about as well.
3. The absence of sulphate of ammonia was attended with a marked falling off, and nitrate of soda cannot replace it.
4. The compound above named beats Peruvian guano.
5. Common salt does no good, but harm, to potatoes.
6. The above mixture gave a crop of 12 tons to the acre on light land, and the same unmanured yielded but half.

**BUTTERMILK.**—Persons who have not been in the habit of drinking buttermilk consider it disagreeable, because it is slightly acid, in consequence of the presence of lactic acid. There is not much nourishment in buttermilk, but the presence of the lactic acid assists the digestion of any food taken with it. The Welsh peasants almost live upon oat-cake and buttermilk. Invalids suffering from indigestion will do well to drink buttermilk at meal times.



*For the Maryland Farmer.*

### SEASONABLE AND PRACTICAL.

I desire to extend to you and your numerous readers the compliments of the season, and to ask of you a little space in your first issue for 1871, that I may have a talk with such of your subscribers as value the discussion of subjects pertaining to the practical operations of the farm, and matters of general interest. Whilst some localities in the rural districts have, during the past season, suffered from adverse circumstances, as a country, we have great reason for gratitude to Him whose reliable promise we have, that "seed-time and harvest" is vouchsafed to us. The effects of the excess of rain in some districts and excessive draughts in others, have been really calamitous, the loss of life and property by the former, occasioned by the unprecedented flood, which so disastrously deluged the valley of Virginia in October last, is certainly without a parallel in this country, in the record of the effects of that element so invaluable as a servant and yet so dreadful when it assumes the mastery. The character of the damage is such, in many instances, as to be irreparable.

The fertile, surface soil of large areas is entirely swept away, similar areas, or perhaps those more extensive, and equally fertile and valuable, are buried beneath a depth of debris of sand, gravel and rock, by which the value of the land is utterly destroyed; but this is not the worst, for many valuable lives were lost, and many others who barely escaped with their lives in their night clothes, have lost all but their lives. The degree of suffering and loss occasioned by drought is sometimes very severe, and has been in some districts of our country, particularly so during the past season, resulting in the failure of crops of all kinds, where most severe, and and it has occasioned much loss to the land owners, also great inconvenience, and real suffering to both man and beast, but it is a "mote" compared with a "beam," when all its disastrous effects are compared with those occasioned by the flood, in the valley of Virginia.

There is scarcely any comparison of the effects of ordinary floods and droughts.

The practical observer well knows the exhausting effect of excessive rainfall on tilled lands particularly, by which more fertility is leached out of the soil and dissipated in one season of excessive wet, than would be exhausted by the growth of a full rotation of crops. In case of excessive drought the crop may be, and frequently is, in a great degree lost, but no depletion of the soil is effected, and such seasons are by no means entirely lost to the industrious, progressive farmer, for he will avail himself of this most auspicious condition of things for cleansing

his land. Spontaneous, worthless and noxious vegetation will flourish under the influence of drought that is fatal to cultivated vegetation, hence, by frequent tillage, bringing to the surface different strata, dormant seeds are vitalized, and when they have once germinated they are easily destroyed, when the soil and air are both wanting in humidity. Such seasons are also very favorable to the execution of the work of reclaiming lands, which are ordinarily so wet that it would be difficult, if not impracticable, to improve them. There are effectual means ordinarily of averting, in a great degree, the injurious effects of both excessive wet and excessive droughts. The former may be guarded against materially by the use of the sub-soil plow, and by underdraining lands that would, by old school farmers, be judged to require no draining, when in fact almost all soils are benefited by both underdraining and sub-soil tillage.

Judiciously located surface drains may also be made very efficacious in preventing the dissipation of fertility in steep lands, that are under tillage in wet seasons, and the ruinous effects of gulying may also, by the same means, be in a great degree prevented. Sub-soil tillage is equally effective as a preventive of injury to crops by drought.

By pulverizing the soil double depth, its capacity for absorbing and retaining rain water is proportionately increased, and the soluble elements of fertility, which would be washed out of a shallow tilled soil, and dissipated, will be collected and retained by the subsoil, when it is pulverized, and will there be stored in a place of safe deposit, subject to vegetable draft when required. Intelligent, provident husbandmen will also provide for drought by growing every season, a crop of fodder corn, which, if not planted too thickly, will make a good growth when pasture grasses are perishing with drought, with which to feed their stock, in case it is needed, in lieu of pasture. And should the season be so propitious that the fodder corn is not required, it will be very profitable, if cured and properly stored for winter use. Another excellent remedy against loss by drought, though rarely practiced, is by avoiding overstocking.

There are few farmers who do not commit this disastrous error, and if the drought is general, or extensive, whole districts being in the same dilemma, relief is not to be found in the sale of the excess of the stock when dearth comes, to a more fortunate neighbor, hence they must seek a remote market, be fed on forage that was designed for, and is needed for winter use, or what is very common, and still worse, the famishing animals are kept on, daily losing condition under the delusive hope that timely rain will come and relieve. There is another result of improvidence and neglect, that is unpardonable,

and has, during the past season, in certain districts, made it necessary to drive every dairy animal so far to water daily that the journey consumed nearly the whole day. A cistern, which could have been constructed at a cost hardly a tithe of the amount lost in a single season, for the want of it, should have been made, and the rain water from the roofs of the barn and other buildings have been turned into it, and stored against the day of need. Instances have occurred when \$2.50 per barrel has been offered by the improvident for water thus collected.

Cisterns are more reliable than wells, and an ample supply of water may generally be had in the use of them, at less cost than it can be from wells. I am constantly engaged in improving country places, and I have not sunk a well for any of my patrons in the past twelve years. I have found that I can provide a full supply of water by the use of the cistern, by making its dimensions such that it will contain a supply for all uses for which water is required, for a period of 90 days, an unusual duration of drought. The amount of water that a roof of given dimensions will supply per annum may readily be estimated.

Calculate the superficies of the building from which the water is to be collected, in feet, multiply that product by three feet, the usual depth of rain fall in this latitude, and multiply that product by seven for the number of gallons contained in a solid foot, and we have the number of gallons. Allow 10 gallons per diem for each horse or cow to be supplied, and make the capacity of the cistern sufficient to supply the number of animals which are to depend on it for 90 days, without rain.

I have adopted this course in numerous instances and have heard no complaint of a lack of water. I have tested various modes of constructing cisterns, and find it best and much the most economical, to cement the walls and bottom or the natural earth, and I usually cover them by turning a brick arch, and covering it with earth to the depth of three feet.

When thus arranged, the temperature of the water will be about the same as that of water from ordinary wells, and perfectly pure and wholesome.—The water may be filtered by a very simple process, but it does not require it in rural districts. The unusual mildness of the autumn, and of the winter thus far, is a subject of congratulation between farmers when they meet. Until quite recently, the rainfall of late, has been in this region much below the average at that season.

The mild dry weather has been very favorable for the work of farm improvements, such as draining, hauling composting materials, road working, building and autumn plowing. I have noticed in districts in which I have been operating for the past month, that a very large area has been broken up for cropping the coming year. Tenacious clays and

especially those in blue grass sward, are greatly benefited by autumn and winter plowing, if the sward is well inverted, but light lands on which the sward is also light, is injured by tillage so long prior to planting, especially if the surface is steep. The effect of frequent tillage and of keeping unnecessarily long in fallow, is very exhaustive, nearly as much so as cropping. The soil being warm and light, all the vegetable matter in it is rapidly and thoroughly decomposed, and rendered soluble and assimilable, at a period when there is no crop on the land to utilize it, hence the fertility is leached and washed out of the soil, and escapes into streams, where it is lost.

Land of this character is not injured by tillage, whether it be very wet or very dry, hence may be plowed at almost any time, and it would be much more economical to defer its tillage until near planting time, for the reasons that I have stated.

Much of the plowing that has been executed in the different districts with which I am familiar, during the past two months, has been very carelessly done. Many of the furrows are only set on edge, in which condition all grasses of the *Poa* family will retain their vitality nearly the same as if the sward had not been disturbed, the effect of which will be, the crop will be deprived of the food which that portion of the sward not turned so as to die and decay would have yielded, and the cost of tillage of the crop will be greatly increased and the product proportionately diminished. I have also noticed that the live stock of the farms has been compelled to subsist on what they could gather from scanty parched pastures, and this is common even on farms where the stalks of the corn crop are still in the field, and many of them laying on the ground decaying. The animals are thin, and are losing flesh daily, no course could be more unprofitable than this.—As soon as pastures begin to fail in autumn, palatable nutritious forage should be fed to the stock, and in sufficient quantity to keep the animals gaining. There is no economy in letting animals fall off in winter, whatever be the character of them, whether for fattening the coming year or for dairy purposes, yet I find it the general practice of stock farmers in Maryland and Virginia. No investment on the farm will give a better return than that used in the erection of warm, dry and well ventilated stables. They need not be expensive.

If the farm barn is judiciously planned, the same roof will cover all the live stock as well as the hay and grain. I have been much surprised of late to see how large a number of barracks are still in use for storing hay and grain. By *barrack*, I mean a barn about half sided, the balance left open, so that every storm beats in on the contents, injuring the quality of the crop stored every year, as much or



more than it would cost to enclose it, and constitute it a *barn*. The closer a building is, the better will it keep hay or grain, provided it has roof ventilation.

I find that many farmers are perpetuating on themselves a very onerous and needless tax, by building and repairing *unnecessary fences*, and very few are growing a hedge for a boundary fence, which would be very profitable in all cases when it is practicable. From careful observation for the past eighteen years, of the course pursued in saving and applying the manure of the farm, by the farmers of Maryland and Virginia generally, I am satisfied that more than 75 per cent. of its value is wasted.

How such an enormous waste is effected, I will make the subject of an article for the *Farmer* in the February number.

I hope you will pardon me for the undue length of this communication. My only apology is that I find such a multiplicity of subjects pertaining to the practical operations of the farm that need reform, that I hardly know where to begin or close.

Very truly yours,

J. WILKINSON,

Landscape Gardener and Rural Architect.

*For the Maryland Farmer.*

### LEARN TO SAVE.

Habits of economy and frugality are nearly or quite as important to the husbandman as habits of industry. We know men who labor hard and make an abundance, but who, never having learned to save, allow waste here and there, in this and that thing, which keeps them down at nearly a dead stand, never making any perceptible advance in prosperity. This waste is usually in small things, counting but a trifle in themselves, but the aggregate of which amounts to a good round sum before the year's end.

It may be that having saw, hammer, and nails in the field to mend a plow or patch a cart, all are thrown down where used, and never thought of more till wanted again, when lo! the tools are injured with rust, and the nails lost.

It may be that the gate is broken, or there's a broken rail in the fence, which is neglected till the stock break in upon crops, and there is much worrying, and much time lost in getting them out again.

It may be that the barn door needs a button or a latch, and some windy day it is blown open, and perhaps a hinge broken; and fowls, pigs, and cows get in and play the mischief generally with corn, hay, harness, etc.

Edge tools may have been left where stock congregate, and as they push and shove each other some of them get cut, and, it may be, seriously injured.

Crops may be gotten in in a slovenly manner so that much is wasted; yea, there are a thousand ways of wasting which if not carefully guarded against will surely cut down all the profits that might otherwise accrue.

B. W. J.

*For the Maryland Farmer.*

### NUT-BEARING TREES.

I desire to call the attention of every American farmer to the value and importance of cultivating nut trees as a source both of profit and luxury. It is a business that will yield no little amount of wealth and comfort at a very small outlay in time or money. But in seeking to meet the wants of the present hour, we are too apt to forget the claims of the future. Yet I hold it to be the duty of *every man* to leave the world in a better condition for having lived in it; and to "be always planting a tree," is a maxim that ought to be practically carried out by every cultivator of the soil. And when planting do not forget the nut-bearing trees. They are things that do not require constant labor and care, like corn or cotton. Why plant the elm, maple, or willow for shade and ornament, when to both of these may be added a profit and a luxury, by planting the walnut, pecan or butternut instead? Or, if the first are already in place, you have, no doubt, many a vacant corner, or treeless pasture ground, where you might drop a chestnut or madeira nut, which in a few years would grow up to blossom and bear fruit a hundred fold. And what an income might be derived annually from our pastures and waste grounds, after the eighth or tenth year, if set with nut trees. Chestnuts sell readily at five dollars a bushel. Suppose fifty trees to an acre, and that from these you take half a bushel of nuts from each tree. This will make \$125, a snug little sum to foot up some of the innumerable small bills arising from the purchase of foreign luxuries. In these stringent times of high labor and heavy taxation, it becomes us to studiously husband every item that may be turned into a source of wealth. Enough nuts may be raised upon any farm, without interfering in the usual operations, to pay the government taxes and the subscription of the necessary agricultural and literary journals for the family. But it is needless to lengthen out this article, and I hope that all who read it will *act* at once upon the suggestion, and begin to drop a nut here and there wherever there is room for a tree, and do not be deterred because the time may be long before you gather the fruit. Have you never eaten the fruit of trees planted by those long since gone? And will you deny to your children the same pleasures that your fathers provided for you? Nay, but scatter the seeds far and wide, and you or your children shall reap a rich and lasting reward. How much may not be added to the revenue of the country by this single item alone, if every cultivator will but follow these suggestions, and occupy a spare hour now, at this season of comparative leisure, in planting white and black walnut, chestnut, pecan, filbert, butternut and madeira nut.

B. W. JONES.

*Cottage Home, Surry, Va.*



*For the Maryland Farmer.*

### AN IDEAL POULTRY FARM.

Were we going to engage in the business of raising poultry and eggs for market on a large scale, and had the choice of location, we should pursue something like the following plan :

We should select twenty acres of dry, elevated forest land, having a growth of hickory, oak, elm, chestnut, mulberry, holly and persimmon, with no objection to the pine, or any nut-bearing or berry-bearing tree. If possible, we would prefer a small stream of pure water running through it also.

We should clear off all small growth, brush, logs, and decayed or unsightly trees; and should at first remove the loose surface leaves. Afterwards we should let the annual fall of leaves remain. We should clear the stream of all decaying leaves or logs. Thus the whole twenty acres would present a clean, inviting appearance, and easy access be afforded to every part.

If there were not enough such trees as the mulberry and plum, we should plant more; and should also plant such nut-bearing trees as would flourish in the locality. We should place boxes for "birdie homes" in all parts of the grounds, and encourage the presence of the little songsters. We should set out grape vines and evergreens, and build us a rustic summer house.

We should select an eligible spot for a cottage and garden; and should arrange our buildings, walks and pleasure grounds for comfort, convenience and easy access.

We should surround the whole twenty acres with a strong picket, six feet high, and made close enough to keep out most enemies of the poultry yard; and partition fences to separate the different breeds and species should be made.

The turkey, who loves a wide range, would be assigned six acres in one enclosure, or range, to themselves. In this lot, the cow, and a few Chester whites, would find ample range—taking care, however, to fence off a small lot around the fowl coops, that the pigs might not disturb the sitting or laying fowl. The pigs, and old brindle, would have comfortable shelters of their own, where they might be penned at night, thus saving a good supply of manure for the garden.

We should fence off four acres more as a range for geese. Old brindle's calf might run in this lot, or a Cotswold or Southdown. Four acres more would be assigned to ducks; separating the different breeds by partition fence.

We should lay off two acres for cottage grounds and garden; and the remaining four acres would be occupied by the best species of hens, separated into quarter and half acre lots. Each division of

fowl would have its own coop or resting place, furnished with boxes for laying and sitting; and all the coops would be so constructed as effectually to bar entrance to any of the enemies of the poultry yard. We should have them well ventilated, dry and comfortable; should be kept clean and free of vermin, and have all appliances necessary to the health of the fowl.

We should devote one acre to a fruit and vegetable garden, cultivated in *the highest style of the art*. The remaining acre would be occupied by cottage, etc., and for the construction of the cottage, laying off and planting the garden and grounds we have an ideal too, but cannot go so much into detail here. Suffice it to say that economy, neatness, order, system, comfort and health would all be considered in the arrangement. The object is a cheap but pleasant *home*, in the prosecution of a light, pleasant and profitable *business*. This plan embraces the production of poultry and eggs as the *main chance*, in connection with vegetables and fruits, butter and milk, and meats for *family use*; also honey, as there would be ample room for an apiary.

The above, then, is about my ideal for a poultry farm. The construction of fences, cottage and buildings, and laying off, is a matter where tastes may differ. The selection of stock, too, is pretty much a matter of choice. As a rule, no attempt should be made to manage too many sorts, nor should too large a number be left together in the same enclosure. There is a great difference between breeding for flesh and eggs, and breeding for "fancy stock." In the latter case, the breeds *must* be kept separate. To successfully carry out all the details of such a work, would indeed require much *brain work*, and would involve much ingenuity and contrivance, and demand the untiring industry and ever watchful care of the owner. It is a business requiring the substitution of mental labor for the mere brute force necessary in other avocations; and as such it demands the attention of those unused to, or incapable of, performing the toilsome drudgery of the farm proper.

B. W. J.

**KILLING CURCULIO GRUBS.**—A Michigan plumb-raiser advises to plow or spade the soil for a space about the tree, just before the ground freezes, and turn on hogs and fowls to hunt and destroy the grubs. A little grain scattered over the ground will induce the fogs to root about more thoroughly. He advises the same course for peach tree borers.

**MANURE** is the one great want in our system of farming. Save everything that will make it, in whatever form it is found, for the dung hill, at last, catches almost everything.

## KITCHEN GARDEN.

## Guide for the Selection of Garden and Field Seeds.

To the Editors of the Maryland Farmer :

I have on hand a letter from a Virginian, asking sundry questions. Instead of replying by letter, I have thought proper to reply through the medium of your journal, which I suppose will satisfy the gentleman, at the same time inform others in a like predicament. He says :

"I am a young man rather beyond man's estate. I own a neat cottage, and a farm containing one hundred and twenty-five acres of rich river land, (one hundred arable,) and the soil light and heavy loam. Since my fourteenth year I have had no practical agricultural experience. During my early life I noticed how my father managed his crops, the stock, and how he cut up and cured beef and pork; and from mama, an inkling relative to making apple butter, lard, souse, and hog's head cheese. Have I land enough, or too much? What mercantile fertilizers would you recommend? But to be brief, what I wish to know particularly, is, what description of vegetable seeds ought I to plant? I have before me several seed catalogues, but there are so many kinds under the different heads that I am quite mystified. As regards time of planting, cultivation, and so forth, I can refer to the back numbers of the *Maryland Farmer*, a journal that I have been reading during the past seven years with much interest and profit."

But I am anticipated.

The most reliable and current sorts are the following, viz :

*Asparagus*.—*Giant*.—Plant one year old roots.

*Beans*, *Dwarf*.—Yellow Six Weeks, Valentine, Mohawk, White Kidney and White Marrow.

*Beans*, *Running*.—Large Lima, Wax, Red, White and Speckled Cranberry.

*Beet*.—Early Blood Turnip, Half Long Blood and Yellow Turnip.

*Kale*.—Green and Purple Curled Scotch, Siberian and Brussels Sprouts.

*Broccoli*.—Early Purple Cape.

*Cabbage*.—Early Large York, French Oxheart, Flat Dutch, Sugar-loaf Savoy and Turnip Rooted—above ground.

*Carrot*.—Early French Horn and Long Orange.

*Cauliflower*.—Early London White.

*Celery*.—White and Rose Colored Solid.

*Cress*.—Curled or Pepper Grass.

*Cucumber*.—Early Cluster, Half Long Green, White Spine and Gherkins.

*Egg Plant*.—Purple Prickly.

*Endive*.—Green Curled.

*Leek*.—Scotch Flag.

*Lettuce*.—Early Silesia, India, Oak Leaf, Early and Late Cabbage.

*Melon*, *Canteleupe*.—Nutmeg, Green Citron, and Mammoth Arlington or Christiana.

*Melon*, *Water*.—Taylor Grey, Mountain Sweet and Citron, for preserves.

*Onion*.—White, Danvers' Yellow and Potato.

*Okra*.—Tall. *Parsley*.—Double.

*Pepper*.—Bull Nose, (for Mangolds,) Cayenne and Cherry.

*Parsnip*.—Cup or Hollow Crown.

*Pea*.—Extra Early or Daniel O'Rourke, Early Hotspur, Bishop's Dwarf, Blue Imperial Dwarf and Tall Wrinkled, and Champion of England.

*Potato*, *Sweet*.—Large Yellow.

*Potato*, *Irish*.—Early Rose and Quaker.

*Squash*.—Winter Crookneck, Yellow, Vegetable Marrow, Turk's Turban and Hubbard.

*Squash or Cymblin*.—Summer, Early White Bush, and Green Crookneck Warded.

*Radish*.—Early Long Scarlet, Red and Yellow Turnip, and Large White Oval.

*Rhubarb*.—Tart, Albert and Victorias, (roots.)

*Salsify*, or *Oyster Plant*.

*Spinach*.—Savoy Leaved.

*Tomato*.—Large Red, Egg and Cherry.

*Turnip*.—Redtop, White Flat & Yellow Aberdeen.

*Herbs*.—Pot and Medicinal, five packets each.

*Flowers*.—Twenty-five packets. Select Annual, Biennial and Perennial.

*Vegetables*, for field cultivation, stock feeding, etc. Late Potatoes, Large Yellow Pumpkin, Dale's Hybrid and Yellow Bullock Turnip, Ruta Baga, Flat Dutch Cabbage, Long Red and Yellow Globe, Mangel Wurtzel, White Sugar Beet, Large White or Red Carrot, Parsnip, Cockstone, Beans and Cow Peas.

Ten dollars will be ample to purchase *garden seeds* for an acre lot.

"Have I land enough?" That depends on your habits of industry, depth of purse and quality of brain. Some say "ten acres is enough." Others, that an average of two thousand is about the thing.

As regards mercantile fertilizers, dissolved bones, poudrette and the super-phosphates are as good as any. If you husband your means at command, you will have no occasion to purchase fertilizers. Presuming you have on the farm six working and coach horses, three cows, twelve hogs, a well stocked poultry house, the stables and yards littered with leaves, straw, green weeds and vegetable matter of every description—the urine from the stables, not a drop of which ought to be lost. Then you have accumulating ashes and bones—the garbage pile for the reception of soap suds, waste from the kitchen and contents of the kettles from the chambers. The practical experience received from your parents during your tender years is valuable as a stand-point, and is, no doubt, indelibly engraven on the tablets of your memory, never to be forgotten.

FLOWMAN.



## AGRICULTURAL CHEMISTRY.---V.

BY J. S. H. BARTLETT, M. D.

## OF THE NATURE OF SOILS AND THE FORMATION AND COMPOSITION OF ARABLE LANDS.

The earth, which furnishes the support to plants, differs widely in the proportion of the various materials of which it is composed, and derives its character from the preponderance of sand, loam, or clay, which serves to form its bulk. An acquaintance with the nature of these different components is necessary to the successful cultivation of the vegetables we may wish to raise, as each variety will produce much better when planted on the kind of soil that is favorable to its growth.

Arable lands are mostly composed of silica, lime, alumina, magnesia and oxide of iron, besides some saline substances. No one of these earths is by itself adapted to cultivation, but by their admixture they correct the qualities or supply the deficiencies of each other; the best soil being that which unites the greatest number of the properties most suited to vegetation. Almost all soils contain in a greater or less degree some substances besides those enumerated, which result from the decomposition of animal or vegetable matter, and which tend very materially to augment its fertility. The rocks, which constitute the basis of the globe, being decomposed by various causes, have produced the soils which, after due amelioration, form arable lands.

The disintegration of these rocks is effected by chemical, as well as mechanical means. It has been remarked in all mountainous districts of perpetual snow, that the most refractory rocks crumble into fragments.

Darwin says: "I have frequently observed, both in Terra del Fuego and within the Andes, that when rock was covered during the greater part of the year with snow, it was shivered in the most extraordinary manner into small angular fragments."—Scoresby has observed the same fact in Spitzbergen. The mountain streams bring down the detached fragments, which, by continued attrition, form pebbles, gravel, sand, or earth, characterized by the mineral ingredients composing the mountains from which they sprang.

As to the part chemical action performs in the decomposition of rocks, it is to be considered that many of them contain lime, and usually some oxide of iron; the lime is constantly disposed to imbibe carbonic acid from the atmosphere, while the oxide of iron combines with its oxygen. When water has insinuated itself into the pores of rocks and becomes converted into ice by the cold it destroys, by its expansion, the cohesion of their particles, producing rents and fissures, thus giving access to the air

which combines with the lime and oxide of iron; the effect of which is to produce an immediate change in all the surfaces exposed to its action, and thence the process of decomposition is hastened and continued. The lower order of plants, the mosses and the lichens which fasten themselves upon the surfaces of the rocks increase the change; their roots are constantly increasing the fissures caused by the water, and their decay form a deposit of vegetable matter, which, by absorbing additional carbonic acid, further facilitates the liberation of those mineral matters which are the natural elements of fertility.

As soon as the surface of the rock is furrowed, and the mosses and lichens have fastened themselves upon it, the different plants which require but little nourishment take root and decay there in turn, and the product of each successive decomposition adds something to the slight bed of earth formed by the first, till, in time, a soil is produced fit for cultivation. Subsequently, the hand of man and the successive generation of a higher order of plants render it suitable for the purposes of agriculture.

Experience teaches that, by the due admixture of soils, that is to say, when they are too stiff, sand should be applied on clay, and clay on sand where they are too open; and by the application of manures, what kind of culture and what species of plants are suited to each soil.

Again chemistry comes in, and by its analysis of the ashes of plants, which it is desired to raise, indicates to the cultivator what special fertilizer he should employ to obtain the greatest results.

The lands devoted to agriculture are generally of silex, sand or gravel, lime and alumina, or clay; with these are intermixed pebbles of different natures and in various proportions, and the remains of animal or vegetable matter more or less thoroughly decomposed. The other substances, which by analysis are found in soils, are not in sufficient quantity to be classed among their elements; when these are too abundant, as is the case in certain localities with magnesia and the oxide of iron, the soils become less fit for vegetation. A mixture of lime, silica and alumina, is considered the best basis for good land, but in order that it may possess all the desirable qualities, it is necessary that certain proportions, which an analysis of the best lands has made known, should be observed.

Bergmann found that one of the most fertile soils in Sweden contained

Coarse silex.....	30 parts.
Silica.....	25
Alumina.....	14
Carbonate of lime.....	30

The most fertile mixture produced by Tillet, in a great number of experiments which he made at Paris, was composed of



Coarse silex.....	25 parts.
Silica.....	21
Alumina.....	14
Carbonate of lime.....	37

On these authorities it is evident that we can conclude about what proportions these different substances should bear to each other in forming what may be called a fertile soil, or more properly one capable of producing. But the fortunate possessor of such must not be herein deceived, although his land may be composed of these desirable proportions, nor flatter himself with the belief that all it is necessary for him to do is to sow his seed in the proper time and manner to reap a rich harvest.—His happy constitution of soil does not of itself afford fecundity, but is only a favorable matrix for depositing the seed, capable of admitting air and moisture, and passing off superabundant rains by percolation instead of evaporation, which would be the case if alumina were in excess; not parting too readily with its moisture, and so be unduly affected by drought, which would be the result did sand, silex or gravel preponderate. It still needs ammonia to hurry forward the different stages of vegetation to maturity, besides the earth phosphates and the different saline or mineral matters which chemical analysis has indicated to be the inorganic constituents of the higher order of plants which man may require for his sustenance or profit.—*Journal of Applied Chemistry.*

### GARDEN WORK FOR JANUARY.

There is of course nothing to be done in the open air in the garden during this month—where frames are used they will require attention—watering the plants with tepid water occasionally, and on mild sunny days inserting wedges under the sashes to allow of a little fresh air. In the afternoon as the sun begins to decline, withdraw the wedges and cover over carefully with mats. If the heat declines in the beds, line the beds all ready with an outside casing of fresh manure.

When there are no frames, cabbage plants sufficient for the use of a family may be raised in the house itself, in the following manner. Take an oblong box, six or eight inches high and two feet long by a foot broad, fill it with rich mould, well sifted, and of the texture of a sandy loam. Sow the cabbage seed in this, and place the box in the kitchen window where the rays of the sun can fall on it, a portion of each day. Water the soil occasionally with tepid water, and cover up carefully of nights, to prevent the possibility of the plants being frozen.

INQUIRE of yourself what you have learned the past year, in your farm management, that will aid you in future labors, and having ascertained make a note of it.

### Report of the Commissioner of Agriculture.

The Commissioner of Agriculture, in his annual report, expresses the gratification he feels in representing that agriculture is in a prosperous condition and productive in a high degree. He says it is the foundation interest of the country, the source of supply of the physical wants of all classes, and the nursery of energy and virtue. Agriculture is further equally essential for the recuperation of the less healthy pursuits of life from their waste and enervation. The Commissioner also says that it is gratifying to believe, from indubitable evidence, that the examples of rational and recuperative culture are relatively increasing, however slowly and gradually they may be making inroads upon the destructive and irrational modes so generally prevalent. These examples are most numerous in the Middle States, and may be seen with comparative frequency in the older sections of the West. They are found occasionally in New England, and are beginning to be noted in the Southern States, but there is no State in which exhaustion and irrational culture is not predominant. The industrial colleges under the land grant of Congress of 1852 have progressed during the past year, and the land scrip has been issued in most of the Southern States, and a portion of it sold; but the Commissioner has heard of no action toward the organization of colleges, and fears the scrip has in some instances been frittered away by sales at nominal prices, as has been the case in many of the Northern and Eastern States. The Commissioner speaks of steam plowing, silk culture, couchoua trees, the statistical division, cattle disease, the library department, grounds, etc., making suggestions designed to be valuable in the future. The number of packages issued during eleven months of the year number 358,391, of which 133,043 were sent to members of Congress, 7,865 to agricultural societies, 71,400 to the corps of statistical correspondents, and 7,960 to meteorological observers. The distribution includes seeds of cereals, grasses, hemp, jute, ramie, opium, poppy, sugar beet, tobacco, sorghum, forest and shade trees, and many of the species of plants oleaginous, edible, medical and fibrous. The most abundant and convincing evidence of the great economic value of this distribution can be obtained from the archives of the department, or gained from the sub-report to the recent annual volumes. The total amount expended by the department since November 30, 1869, is \$167,175, including salaries, leaving the total balance unexpended of the appropriation for the current year of \$107,370.

Three things to hate—Cruelty, Arrogance and Ingratitude.

From the Marlboro Gazette.

## POTASH AS AN INGREDIENT OF MANURE.

MARYLAND AGRICULTURAL COLLEGE, }  
October 30th, 1870. }

GEO. W. WILSON—*Dear Sir*: I send with this a copy of an article on the subject of Potash, as an important constituent of a good fertilizer. It is from the pen of Prof. Mallet, of the University of Virginia, an accomplished chemist, and professor of Agricultural Chemistry in that Institution.

I commend it as well worth the attention of your agricultural readers.

It is well known to all practical agricultural operators, that the land deteriorates as its products are carried off from it, without return of the elements contained in those products. And as Potash is shown by the annexed article, to be an important constituent in nearly all the articles grown on our lands; and as it has been hitherto supplied, chiefly by the use of ashes, it becomes important to seek for an available substitute, in a country where wood and ashes are scarce and high.

This substitute is, the mineral salts of Potash, to be obtained in Baltimore, direct from Prussia; and as the chemists of France found the best Tobacco brought to that market, always contained the largest amount of Potash in its ashes, it is reasonable to suppose that both the quality and quantity of this staple, would be improved by the use of this constituent, in the manner applied to the Tobacco land.

These salts can be obtained in Baltimore, at about \$2.50 per hundred pounds; and bone dust treated with a solution of them, (in the proportion of about 100 lbs. of the solid salts to the tun of bone dust,) will be found more immediately productive; and will produce a better quality of Tobacco. With the conviction that such would be the result, I commend the experiment to all growers of Tobacco.

Respectfully,

A. H.

## Potash as an Ingredient of Manures.

BY PROF. J. W. MALLET, UNIVERSITY OF VIRGINIA.

Interest is being rapidly excited, on this side of the Atlantic, with regard to the addition of potash to mixed manures, as is already practised in Europe on a great scale and with excellent results, advantage being taken of the vast deposits of mineral potash discovered a few years ago to the south of Magdeburg in Prussia Saxony.

That benefit is to be expected from the application of potash as a fertilizer is fully shown by a glance at any good list of analyses of the mineral matter removed from the soil by our commonly cultivated plants.

Thus we find, in round numbers, in the ash of

	per cent. of potash		per cent. of potash.
Wheat, (grain) 31	"	Potatoes, (tubers) 60	"
Barley, " 22	"	Cabbage, (leaves) 49	"
Oats, " 16	"	Apple, (fruit) 36	"
Buckwheat, " 23	"	Cherry, " 52	"
Indian corn, " 27	"	Sug. cane, " 13	"
Rice, " 18	"	Red clover, " 35	"
Peas, (seed) 40	"	Timothy, " 29	"
Beans, " 39	"	Meadow hay, " 26	"
Gar. t' ps, (roots) 40	"	Grass er' ly stage, 56	"
Swedish do " 51	"	Cotton, (fibre) 42	"
Beets, " 53	"	Tobacco, " 27	"

The well known great fertility of the soil on the slopes of many volcanoes, as Etna, Vesuvius, &c.,

when resting upon and derived from volcanic rock easily decomposed, and rich in potash, also affords illustration of the value of this material to plants—and yet further evidence of the same kind has fallen under the notice of every one who has watched the effect of wood ashes strewn over land, or has marked the difference in the yield of a freshly cleared or burnt over piece of ground, and of one long in cultivation.

Indeed, there has been a pretty general admission on all hands of the importance of this alkali in its relations to plant life.

Yet scarcely any substance known to possess fertilizing power has, until lately, been used so sparingly, or so rarely.

Lime, sulphuric acid, phosphoric acid, and ammonia have been, and are still, used in immense amount, and in forms derived from a very large number of sources. Peruvian guano gives us ammonia, phosphoric acid and lime, raw bone and fish guano, afford the same substances in other proportions—the host of "phosphatic guanos" (Nevassa, Redonda, Sombrero and the like) give us phosphoric acid and lime—land plaster consists of sulphuric acid lime, the manufactured "superphosphates" yield phosphoric acid, lime, and sulphuric acid—and lime is abundantly presented to us as burnt lime, marine shells, calcareous marl, tufa, &c. Magnesia, also a constant constituent of plants, has been, like potash, a good deal neglected, though coming in incidentally with lime in several of its forms.

Except as wood ashes, and in this condition but sparingly, potash can hardly be said, until lately, to have been included in the list of fertilizing materials, though it occurs, and in relatively good proportion, in the article of that most valuable of all fertilizers, properly saved stable manure.

The obvious reason has been that the commercial price of potash was too high—it was practically unattainable upon a scale commensurate with the demands of the world.

The discovery of very large beds of mineral salts of potash overlying rock salt at Stassfurt, in Prussia, has greatly changed this state of affairs, and now, after but a few years of working these deposits, potash, though still a valuable substance, has become accessible to the farmer as well as the manufacturer on a much larger scale and at much reduced prices.

Thus in 1859 the exports from Canada (which country and Russia produced most largely of potash) were 25,599 barrels of "potashes," and 12,221 barrels of "pearlashes." I do not know the exact weight of the barrel, but assuming it at 200 pounds, this would only represent altogether 3,377 English tons of these two materials. In 1867 the crude potash salts produced from the Prussian mining excavations alone amounted to 1,430,000 per cent. while the works on the same deposit just across the Anhalt frontier yielded about the same quantity. Hence the product from both for the year named may be set down at 140,477 English tons.

As regards cost—taking "muriate of potash" of eighty per cent. as the standard, the market price for an average of eleven years (1855-'65 inclusive) has been reduced for the present year in the proportion of 305½ to 153, or almost exactly to one half.

The works at Stassfurt, of which the first were established in 1861, are being extended to meet the growing demands of the world, and recently it has been announced that at another locality, in the Austrian province of Galicia, rich beds of potash salts have been found, there also in association with common salt.



There can be no doubt of the great value to the agriculture of the world of these great and fast-increasing supplies of so important a material.

It only remains rightly to see this addition to our resources; to ascertain accurately the extent to which potash may be advantageously used upon our various soils and principal crops, the best time, and the most judicious manner of applying it. Much has already been done in this direction in Europe, and the experience of last year in this country afforded most encouraging results, notwithstanding the great drawback of very unusual drought.

The leading idea to be borne in mind is that these potash salts are not of themselves all sufficient and independent manures—are not rivals of bone dust, plaster, lime, or fertilizers yielding ammonia—but are simply most valuable additions to these, supplying that which they do not contain, and cannot be made to yield.

### Cotton Seed Manure.

We see still going the rounds of agricultural papers instructions for the use of cotton seed as a fertilizer, and all predicated upon the idea of using the seed in an *unbroken* state. The receipts given us for using this valuable manure either tell us to rot, compost, or sow broad-cast. We are perfectly sure that results have demonstrated that there is great loss by either of these methods. Professor Hilgard, of Mississippi, (very high authority,) holds that the oil, the lint and the *unbroken* shell of the cotton seed are all unfriendly to a maximum advantage in the use of this fertilizer. It may not be generally credited, even among those familiar with the use of cotton seed as a manure, that much of the mass of these seed, after plowed into the ground with small grain, will lie for months with the shell unbroken, and showing the kernel only shrivelled or wasted to a black substance which seems to have been quite inoperative. We composted cotton seed and fowl-house manure last year, and kept the mass wet with slops from the house fully six months, and upon opening the bulk, we found a very large proportion of the seed not only unrotted, but as white as when we buried them. The proof of the waste that our old mode of using cotton seed occasions has been amply furnished by the experiments of Mr. Van Dusen, of DeKalb county.

That gentleman demonstrated by actual trial, that five bushels of *crushed* cotton seed make a difference of seventeen bushels of corn in an acre's production, and four hundred pounds of seed on an acre of cotton. The results not only exceed anything of record, in that line of experiment, but prove beyond all dubiety that in our usual mode of applying cotton seed to our crops we waste or misapply a very large proportion of one of the very best manures known to agriculture.—*Ed. The Plantation.*

Three things to love—Courage, Gentleness and Affection.

## SCIENTIFIC.

### Heat of the Gulf Stream.

Mr. James Croll, of the Geological Survey of Scotland, has recently been making a calculation of the amount of heat transmitted by the Gulf Stream, and has come to the conclusion that the total quantity of water conveyed by the stream is probably equal to that of a stream 50 miles broad, and 1,000 feet deep, flowing at the rate of four miles an hour, and that the mean temperature of the entire mass of moving water is not under 65° at the moment of leaving the Gulf. He thinks we are warranted to conclude that the stream, before it returns from its northern journey, is on an average cooled down to at least 40°; consequently it loses 25° of heat. Each cubic foot of water, therefore, in this case carries from the tropics for distribution upwards of 1,500 units of heat, or 1,158,000 foot-pounds. According to the above estimate of the size and velocity of the stream 5,755,680,000,000 cubic feet of water are conveyed from the Gulf per hour, or 133,816,320,000,000 cubic feet daily. Consequently, the total quantity of heat transferred from the equatorial regions per day by the stream amounts to 154,959,300,000,000,000 foot-pounds.

### Solubility of Clay in Water.

M. Schloessing has shown that clay is soluble in distilled water. There appears to be a colloidal solution that will remain for months, but if a drop of chloride of lime be introduced the liquid becomes instantly clear. The water of the Mississippi always contains more or less alumina in suspension, which can be removed by adding a few drops of a solution of chloride of calcium, or of sulphate of lime. In this manner the Egyptians clarify the water of the Nile, which is always turbid.

### A Spontaneous Combustible Gas.

The bi-bromide of ethylene, when mixed with oxygen gas, takes fire spontaneously in the sunlight. The bromine appears to combine with the hydrogen in a manner analogous to the union of chlorine with hydrogen in the sunlight.

A HUMANE way of killing insects for preservation is to drop them into a jar of carbonic acid gas. This does not injure their colors in any way, but kills them quickly. The gas will be easily retained in a stoppered bottle, and is very easy to make. The action of sulphuric acid upon marble dust, or carbonate acid of soda generates it rapidly. Insects thus killed can be kept perfectly in the gas till they are put in the cabinet.



## The Poultry House.

### HINTS ON RAISING POULTRY.

Poultry raising, like any other branch of business, to be successful, requires attention—requires in the attendant or manager an attractive interest and sympathy for the birds under his or her care; with this and the necessary intelligence and means, success is almost certain; but without these qualifications, in some considerable degree, success will be somewhat doubtful.

Birds in a wild state are taught by the instinct of their nature to provide for and take care of themselves; they have the wide world for pasture ground; they choose the latitude most agreeable to their system, can go south to winter and north to breed and rear their young in summer; can select their food in such variety as their taste and the requirements of their health dictate; they are their own servants and doctors, their own architects and their own upholsterers; the young are duly guarded and provided for by the strongest paternal affection.

The domestic bird is deprived of these natural advantages and is dependent on its owner and keeper for such care and attention as he or she may supply; the best care given will always be the best rewarded.

The keeper of domestic poultry has much to learn both theoretical and practical; he should read, to learn the experience of others, he should carefully note his own experience and use as much common sense as he can bring to bear in their application. It is not necessary that poultry should have food; but they should have it in proper quantity, in proper variety and at proper times; small feeds and often; clean troughs, clean floors, clean nests and clean roosting poles, comfortable houses, well ventilated, to keep warm in winter and cool in summer, always clean and free from vermin.

Experience has shown that it is not good economy to keep too many fowls together on one farm. From fifty to a hundred hens with one cock to every ten or twelve, will yield a larger profit in proportion, than a greater number; but buildings may be erected on different parts of the same farm, at each of which, poultry may be kept. Time of incubation about twenty one days.

Poultry raising for the last few years has been very profitable, the demand has exceeded the supply as evidenced by the high prices in market of both poultry and eggs, and the demand seems likely to keep pace with the supply, so that there is no danger of a glut in the market. The best way to purify the atmosphere in a poultry house is to sprinkle the floor frequently with plaster. The inside of the

house and roosting poles should be frequently white-washed with quick lime to destroy vermin. Nest boxes should be so constructed that the hen will not be seen, and so located as to be easily reached by her.

As hinted at in the commencement of this article, the person who undertakes to rear and feed poultry should delight in it. But one and always the same member of the family should do this and let no other business or matter interfere—should see and attend to them early in the morning and see that the evening feed is given before the time of going to roost and also that all are properly housed before dark. Much practical knowledge will be gained by the attendant that would be lost if the duty were divided among the different members of the family.—*American Stock Journal*.

STRIPPING TOBACCO.—A writer in the *New England Homestead*, advises growers not to be in a hurry to get tobacco down and stripped, for if it is done now, a great mistake will be made; that more sap will be found in the stem than is supposed to exist there, and if stripped early, the tobacco will injure after being bulked. He says, let it hang on the poles till thoroughly cured, if it takes till next January or April; then strip, assort and pack carefully and honestly. If you have occasion to pack it in boxes, use boxes two and one-half feet square, inside, by three and one-half feet, outside, in length. He has often seen tobacco, that the tips of the leaves would have to fold over in a three and a half foot case when packed; but speculators and buyers object to a longer case, and with us insist, almost invariably, upon the above sized cases.

HOW TO COMPUTE INTEREST.—*Six per cent*.—Multiply any given number of dollars by the number of days of interest desired, separate the right hand figure and divide by six; the result is the true interest on the number of days at six per cent.

*Eight per cent*.—Multiply any given amount by the number of days upon which it is desired to ascertain the interest and divide by 45, and the result will be the true interest for the time required.

*Ten per cent*.—Multiply the same as above and divide by 36, and the result will show the interest at ten per cent.

Provide for the future by taking care of the present. Develop all the natural resources of your farm. Take care of your forest trees. Study your soils. Keep an accurate debit and credit account with your farm. Annually increase its productive capacity.

Three things to contend for—Honor, Country and Friends.

## Mechanical.

### FARM GATES.

A correspondent in the *Southern Cultivator* gives his plan for putting up farm gates: I keep up about fifteen farm gates, and am accustomed to make them myself, and as I have no particular love for that sort of exercise, I claim for the gates I prefer, all that is aimed at in their construction. They are light, cheap, durable, never swing, and are slightly and strong.

A man, with any skill in the use of tools, can put together one of undressed lumber in three hours.

For a good strong plantation gate.

1 piece 5 by 3 inches, and 5 feet 8 inches long, if hung by hinges, or longer, if by hinge and socket, of good sound timber.

- 1 plank 10 by 1, 9 feet long, for base plank.
- 4 " 7 " 1, 9 " "
- 2 slats 4 " 1, of suitable length for braces.
- 3 " 4 " 1, 5 feet long.

Countersink the planks in the upright rail and nail over their ends one of the short slats. The planks being put at proper distances apart, say 3½, 4, 5, and 7 inches, the other ends are received between the other two slats. Then put on the braces opposite each other, their ends fitting into small notches made for the purpose. The braces must extend from the top of the front end of the gate to the bottom of the base plank at the other end. Put it together, either with wrought nails and clinch them, or use the cut nails and put three bolts, with taps 3 by ½ inches, in the front slats, one at top, middle and bottom, and three in the braces. I prefer to hang with hooks and hinges. The planks may be let into mortices in the back rail, but requires more labor, and only adds to the appearance. Light lumber, and dressed, makes a handsome, plain gate for lawns. Poplar is preferred with us, as it will not warp in the sun.

### Plan for a Hog House.

Martin Hellar, of Mount Morris, Ill., sends the *Western Rural* his plan for building hog pens: The building is 24x40 feet, with stone wall six feet high. On this wall I have a strong frame building eight feet high with feeding entry in the center four feet wide, and four pens 8x10 feet each, on each side with troughs arranged to feed and water from the entry. I have a small door in the corner of each pen so that the hogs can go into the outside pens, thereby keeping the inside pens clean for eating and sleeping. The outside pens are 6x10 feet each with open space for cleaning.

At the end of this building I have a slaughter

house 14x24 feet attached, with steamer, slop tanks and granaries and if it is desired the upper part can be used for a smoke house; but I would advise that a hen house be built at some other convenient place, as my experience has been that hen-lice will kill pigs; and if any one doubts it let him try it. The pigs will become blind and die when apparently in good health. My pump at the hog-house is so arranged that I can water any pen by the use of pipes.

MOVABLE HORSE SHOES.—That this is the age of progress in applying practical results from scientific experiments cannot be questioned. The present wonder, that we would call the attention of our readers to, is a late invention in the way of horse shoes. A company in Chicopee, Massachusetts, are engaged in manufacturing a peculiar adjustable horse shoe, which is made to be taken off at night, or when the horse is not being used, and again put on when wanted, as readily as a pair of boots. The corks of the shoes are also adjustable, or, in other words, movable, and new ones can be fitted in the place of old when one set is worn out. As this company has not yet placed their new invention in market as a regular commodity, we are denied the privilege of a further description.—*Scientific American*.

### Recipe for Curing Pork.

At a recent meeting of the Worton Agricultural Club, of Kent county, Md., the subject for discussion being "Fattening, Killing and Curing Pork," a member gave a "recipe which he received from the late Major Reybold, for curing meat and spoke very highly of it; he had lost no meat nor seen a skipper in his for the sixteen years he had used it, and spoke of the hams as being very juicy and of fine flavor. I intended to use the recipe this fall, and as some of your readers might like to use it also, I will give it: For every 80 lbs. of pork take 1 lb. of salt, ½ lb. sugar, ½ lb. saltpetre, mix them well together and rub the meat thoroughly with the mixture, allow the meat to remain on a shelf or other convenient place for 24 hours, then salt away, using two quarts of salt to every 80 lbs of meat, allowing it to remain in bulk for 15 days, by which time it is cured and fit to hang up and smoke. An opening should be made in the cask to allow the pickle that will make to run off. It was held that meat should not be smoked in damp or wet weather, as the dampness caused the smoke to blacken the meat and prevented it from penetrating."

PETER MYER'S farm of 117½ acres, near Westminster, Md., has been sold for \$11,098.67, or \$94.86 per acre.



THE  
MARYLAND FARMER,

AT \$1.50 PER ANNUM,

PUBLISHED THE 1ST OF EACH MONTH,  
BY

S. SANDS MILLS & CO.

No. 145 WEST PRATT STREET,

Opposite Maltby House,

BALTIMORE.

S. SANDS MILLS, } Publishers.  
E. WHITMAN, }

BALTIMORE, JANUARY 1, 1871.

TERMS OF SUBSCRIPTION:

\$1.50 per annum, in advance—6 copies for \$7.50—10 copies  
\$12.00.

TERMS OF ADVERTISING.

1 Square of 10 lines or less, each insertion.....	\$1 50
1 Page 12 months .....	120 00
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John Merryman,  
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John B. Russell,  
Dep't. of Agriculture,  
Prof. Wm. P. Tourey,  
Robert Sinclair,  
B. W. Jones, Va.  
Geo. H. Mitnacht.

CHANGING POST-OFFICE.

Our friends in changing the address of their paper will please state the name of the *new* office as well as the *old* one. It is rather a troublesome task to look over some 6000 names to find out from what place he wishes the change to be made. We have had a number of remittances made us, not stating the post-office, that we have been unable to find on the books until after great delay, so as to credit with the amount. Our friends will be a little more careful in the future.

THANKS.—We beg to express our thanks to our many friends for the interest they have taken in securing large additions to our subscription list.

THE NEW YEAR.

We wish all the readers of the *Maryland Farmer* a happy New Year—many of them are old acquaintances of ours, and although many also are new ones all will, we hope, go through the coming year with us, and at the end of it acknowledge that our comradeship has been pleasant and courteous as well as materially profitable. We have a most hearty desire that the winds and the rains and all the gentle influences of the season will favor their work and ours. And who has a better right and upon whom is the duty more incumbent to send greetings of warm good will at this the opening of a new year. Our friends and ourselves are laborers in the same field and have at heart the same interest—that of the extension of agricultural knowledge, in regard to the method of tillage and the improvement of the soil. Each recurring year opens up new fields of information, and many new views are constantly presenting themselves in a plausible guise, but which require the use of experience to prove their value.-- Agriculture is becoming annually more progressive and less of a blind running in the old ruts of routine. More attention is given to the laws that govern the changes of the season, to the large and important department of chemistry that bears upon the constituents of soils and its proper fertilizers. It is therefore of essential importance that our farmers and planters should keep themselves well informed in all matters pertaining to their special business. Not only the nature and qualities of their soils and the fertilizers appropriate to them, but also every thing pertaining to the field, the farm, the garden, require to be carefully studied, for it is as essential for those engaged in rural affairs to keep well up with the progress of the age and the developments of scientific agriculture, as it is for the lawyer to be informed as to the latest decisions of the courts, or the physician in respect to the newest discoveries in medicine.

TO ADVERTISERS.

Our friends desiring to avail themselves of our advertising columns, as a medium of extending their business, are requested to send in the copy by the 15th of the month, as we are compelled to put the last advertising form to press by the 20th, so as to enable us to issue promptly by the 1st of every month.

A Present.—Those of our friends wishing to make a New Year's Present to a rural friend, could not do a better thing than forward the *MARYLAND FARMER* for one year, which would cost him only \$1.50. They can be mailed from this office.



## DEATH OF GEN. GEORGE W. HUGHES. COTTON SEED AND ASHES---COMPOST.

The death of Gen. George W. Hughes, which took place on the 3d of last month, is a source of great regret to all to whom this estimable and genial gentleman was known. To us his loss is not less sad, for he was a valued contributor to the *Maryland Farmer*, and its warm and steadfast friend. He was, moreover, well known not only throughout Maryland, but also in the adjacent States, and had held many positions of honor and profit, both political and otherwise. He was a graduate of West Point; had served in the engineer corps in the war with Mexico, but subsequently resigned his commission. His engineering experience was afterwards called into requisition, and for a short time he was President of the Northern Central Railway. He was also connected with the Panama Railway survey, and latterly was appointed on the commission of engineers to report on the best mode of improving Jones' Falls. For many years past he has resided at West River, where he died. He was as hospitable as he was courteous, and in the neighborhood in which he lived, in Baltimore, where he had many attached friends, and throughout Maryland, where his acquaintance was extensive, his fine qualities will long be remembered, and his loss severely felt.

## GRAPE GROWING IN MARYLAND.

We cannot but admit the justice of the impeachment of our correspondent Geo. H. Mittnacht, when he charges us with the neglect of overlooking one great interest of our State, the culture of the Vine, and shall make amends in the future, by devoting a larger space in our *FARMER* to the discussion of this subject. He says we shall not want for an excuse or material in conducting this department, and intimates that he will bring to our aid the members of the "Maryland Grape Growers' Association" in making this feature of our monthly interesting and instructive. We will heartily accept their contributions, and hereby extend a cordial invitation to each of them to give us their experience for publication in the only magazine published in Maryland devoted to agriculture and its kindred sciences.—Our old and esteemed friend will find that we have enrolled his name among our Special Contributors, and are ready to enlist other of his members in the same good work.

LAND SALE.—The land situated in Calvert county, belonging to Virgil Gantt, and supposed to contain about 800 acres, was purchased by A. Bowen, Esq., of Prince George's county, for \$7,200.

Three things to govern—Temper, tongue and conduct.

## A Compliment and a Question.

We publish the following letter for two reasons. First, because it embodies a gratifying compliment to the *MARYLAND FARMER*, for which the kindly-hearted writer will receive our thanks; and next, because it is our duty, as it is also our pleasure, to respond to any questions on Agriculture which may be put to us by our friends. Here is the letter:

SMITHFIELD, JOHNSON Co., N. C., }  
December 6, 1870. }

To the Editors of the *Maryland Farmer*:

GENTLEMEN:—The last number of your excellent paper is received for 1870, and, like all the preceding ones, is full of useful matter to the farmer. You may depend on it, I shall try and have my neighbors subscribe for it, for I well know it will amply repay them.

This has been a disastrous year to cotton planters here, on account of rain and low prices; but we shall never prosper while we have to depend on the North for supplies, and plant only cotton.

I want your advice how to use cotton seed ashes. You all tell us not to mix cotton seed and ashes together. Well, I will tell you what I thought of doing—mixing say fifty bushels of cotton seed and thirty bushels of ashes together, just as you would compost any other manure, viz: a layer of each, and on each layer put a good sprinkling of plaster to retain the ammonia; and in the spring open my drill, sow by hand, throw on one furrow, or else, if it was time, put my ashes, seed, &c., in bottom of drill, and then put my guano on top and bed up on all at same time. The reason why I do not compost the ashes and seed with muck is, it is too far to haul.

When I could not get the ashes to mix with the seed, how would lime answer, and what amount, say on poor sandy land?

Yours truly, J. McCLAIR.

A compost of wood ashes and cotton seed unleached—the compost to remain in bulk until fermentation sets in—with the addition of plaster, as proposed by our correspondent, would prove an excellent fertilizer for cotton, by reason of the valuable supply of potash furnished by the ashes. Where guano is also used, the compost ought not to be applied until fermentation has entirely ceased. On no account would we compost lime with cotton seed, if guano is also to be applied. But lime composted with cotton seed, and the ammonia retained by the use of plaster, would, in the absence of guano, make a good fertilizer.—EDS. *FARMER*.

CHEESE FACTORY.—Farmers and others interested in starting a cheese factory held a meeting at the Maryland House, Rising Sun, Cecil Co., on the 10th of December, Barclay Reynolds, Esq., President, Job Haines, Secretary. M. J. Hunt and B. Gifford were appointed a committee to visit existing factories, with authority to make a thorough investigation.

## CULTURE OF BARLEY.

A correspondent at Salem, Roanoke County, Virginia, asks for the following information relative to barley :

"Please inform me the price, in your market, of good barley seed—also, whether barley is in this (Virginia) climate, a fall or spring grain? I desire sowing a field in barley this spring; will it answer to sow at that time? How shall we prepare the soil, harvest, cure, &c.?"

We have never raised barley with any great success in this latitude. One reason for this may perhaps have been from the fact that its culture has been special with us rather than general. But it can scarcely have been thrown out of our regular series of crops for that reason alone. We do not say that our climate and soil are entirely adverse to it, but it is certain that barley has been cultivated more largely in the neighbouring State of Pennsylvania, and further to the northward than it has with us. The great demand which of late years has sprung up for barley for malting purposes renders this cereal very valuable, and we should be glad to learn that some of our readers have fairly tried what crops of it can be raised south of Mason and Dixon's line, on land in really good condition and well tilled.—The soils best adapted to the growth of barley are light loams in a good state of fertility. On wet cold lands and stiff clays barley will not succeed.

**PREPARATION OF THE SOIL.**—Plough deep; harrow and cross harrow until the soil is finely pulverized. If the land is not rich spread over it before ploughing a heavy coating of manure, for barley will do better under heavy manuring than any other crop except corn.

**OF THE MANURE FOR BARLEY.**—Where the soil is poor and manures are required, either of the following composts or mixtures will be found sufficient for an acre :

- No. 1.—10 two-horse loads of stable manure;  
10 two-horse loads of wood's mould or marsh muck;  
10 bushels of leached wood ashes;  
1 bushel of plaster;  
1 bushel of refuse salt.

Compost these; let the mass ferment well; then break it down, mix, cart over, and after broadcasting, plough under.

- No. 2.—150 lbs. of phosphatic guano;  
2 two-horse loads of wood's mould or marsh muck;  
5 bushels of wood ashes;  
1 bushel of refuse salt;  
1 bushel of plaster.

- No. 3.—4 bushels of bone dust;  
10 bushels of ashes;  
2 two-horse loads of wood's mould or marsh muck;  
1 bushel of refuse salt;  
1 bushel of plaster.

Let the mixture remain in bulk for two weeks; then cart out and spread broadcast and plough in.

**LIABILITY TO INJURY.**—Barley is less liable to be injured than any of the cereals. It does not rust; and rarely suffers from the attacks of insects. Rainy

weather, at harvest time, is the only thing to be feared as the grain sprouts readily after cutting, and is thus seriously damaged for malting purposes.

**HARVESTING AND CURING.**—Commence harvesting barley as soon as the grain acquires the consistence of stiff dough and before the heads begin to droop. If left until fully ripe and hard, the grain shatters very much. After cradling, if the straw is still green, leave it in swaths for twenty-four hours.—Then bind and shock up in two rows placed closely together without caps. Let it remain in shocks a day or two, after which it will be in a fit stable to carry to the barn.

**TIME OF SOWING,** is either fall or spring. If seeded in the fall, it should be sown about the same time as wheat. If in the spring, as soon as the ground can be got in good order. As to the *mode of seeding* it is the same as that of wheat. It is sown broadcast, or in drills. The depth of covering the seed from 1 to 2 inches.

**QUANTITY OF SEED TO THE ACRE.**—If the soil is in good condition sow two bushels of seed to the acre.

*Price of Seed* ranges from 85 cents to \$1.50.

There are many names given to different kinds of barley; but they appear to be divided into three kinds, the two-rowed, the four rowed, and the six-rowed. Winter barley is mostly sown in mild climates, as in the south of France, Spain and Italy. This variety would suit the South best. Spring sown barley, it is said, gives the largest products. The variety preferred for spring seed, is the two-rowed. Barley stands heat and drought well, and will grow in a greater diversity of climates than any other member of the grass family.

**Horace Greeley's Essays, "What I know of Farming,"** which have been published in The TRIBUNE every week during 1870, are to be printed in book form, and a copy will be sent, post-paid, to each subscriber who sends \$10 for THE DAILY, \$4 for THE SEMI-WEEKLY, or \$2 for THE WEEKLY TRIBUNE, and requests the book at the time of subscribing. This will enable old subscribers to secure the Essays for preservation, on renewing their subscriptions, and new subscribers will, of course, be glad to obtain them, free of cost.

**ECLIPSES.**—There will be four eclipses in the year 1871—two of the sun and two of the moon. The first will be a partial eclipse of the moon, January 6th, partly visible here; the second an annular eclipse of the sun, June 17th, invisible here; the third a partial eclipse of the moon, invisible; the fourth a total eclipse of the sun, invisible.

THE BEE KEEPERS, of Pennsylvania, will hold a State convention, in Meadville, January 11. The object of the meeting is to organize a permanent State organization.



## Grape Culture.

### GRAPE GROWING IN MARYLAND.

To the Editors of the Maryland Farmer :

The usefulness of your paper to farmers, is acknowledged in general. Still, it could be more so, if in future, you would not neglect, as heretofore, one branch of industry. It is well enough to describe big steers, big hogs and fast horses, raised by big farmers, or gentlemen of large means, to raise those big things with. But it is different with men of only small means, or few acres. They have to make a living for their families often on small spots, which would not be sufficient to raise even a single big steer—I allude, to the growing of grapes.

Having just returned from a trip through the States of New York, Northern part of Ohio, Michigan, Illinois, Iowa and Missouri, I am satisfied that in many districts through those States, the products of the vine are of far more value than all the big cattle and fast horses, on twenty times as many acres. Along the Hudson River, particularly around Troy, on the shores of the little Cayuga and Seneca Lakes, near Hammonds Port, every hillside and otherwise favorable location, is covered with grape vines. At Brocton, a station near Lake Erie, are sold daily thousands of pounds of grapes, to passengers of the different trains, and thousands of tons sent to New York and other markets, from vineyards of Salem, on Erie and others in the neighborhood.

Around Sandusky are over three thousand acres planted with grape vines. I visited the vineyard of General Mills, of eighty acres, seventy in bearing. The vines were loaded with fruit, which he was just harvesting, and pressing for still and sparkling wines, of which he must have made from fifty thousand to sixty thousand gallons.

Mr. M. H. Lewis, of Sandusky, is also doing an immense business in grape roots and cuttings. He had an order on hand from one party alone from Michigan, for over twenty-five hundred dollars worth of grape roots and cuttings, showing the spirit in regard to grape growing. The same may be said of Illinois, Southern Iowa, and particularly of Missouri. Now, a vineyard of eighty acres is a big thing, as a vineyard, yet not many big cattle could be raised on them, and I would like to see any farmer of Maryland make more on eight hundred acres by raising cattle, hogs, corn or wheat. But most of the grapes are by no means raised in such large vineyards, for such are very rare, but mostly in vineyards of one, two, four and six acres, and many in gardens and yards. The climate of Maryland, as well as its soil, are as well, if not better adapted, than many of the Western States, for the growing

of grapes; and why should not the city of Baltimore as well as Washington, be supplied with this delicious fruit, so refreshing, so wholesome for all, with grapes grown in Maryland. That the market for grapes cannot be so easy overstocked, has been satisfactorily proved, by grapes selling now for double the price in neighborhoods where thousands of acres are in cultivation, than they did when they were raised only on a few acres. Concords and Catawbas were sold this fall in St. Louis for ten cents a pound, when in Baltimore the same kind brought only four, six and ten cents. The taste for grapes has increased, and will continue to do so from year to year, until they become a necessity. They are also a more sure crop, than most any other fruit.—They are also not quite so perishable, as peaches, strawberries and raspberries, and their season extends over months, nay, over years, as fruit and wine. Since my election about a year ago, by the Grape Grower's Association of Maryland, as President *pro tem.*, I have corresponded with many grape growers in the State, from whom I received generally cheering news, and all are hopeful for the future. The same may be said from the adjoining counties of Virginia. There are now in Maryland, as far as I could learn, from four hundred to five hundred acres in grape vines; a very few for our State, it is true. Yet, the march is onward.

Now, Messrs. Editors, will you fold your arms, and look on, as heretofore? Do so, if you can—still the march will be onward. In other grape-growing States, an agricultural paper would be scorned at, had it not in its table of contents, a line like this—"The Vineyard"—describing suitable soils, situations, varieties, their habits, and the work for each month. Do likewise, and you will put under obligations many grape growers. You shall not be in want of material. It will be furnished to you as needed. I intend to call together the members of the Grape Grower's Association of Maryland, the coming spring, to elect officers, to effect a permanent organization, and to exhibit new wines. Should you take an interest in the cause, you will hear from us again.

Very respectfully yours,

G. H. MITTNACHT.

Pikesville, Dec. 23, 1870.

### Bark for Ties.

The bark of the Linden tree is prepared for tying grape vines by peeling, tying in bundles, and putting in a pool of water. Let it lie in the water until the inside becomes loose, so that it will come off in pieces like ribbon; then take it out, peel off all that is loose, tie up the second time, put it back in the water, let it stay until it becomes loose again, strip off and throw the outside away.

The Pawpaw, managed in the same way, is better than the Linden or Bass tree.—*Rural World.*

## PLANTING A VINEYARD.

The inquiry is often made, "How shall I set out a vineyard, and is there any profit in cultivating the grape?" As an answer to both queries, we append a statement made by Capt. John B. Moore to the Middlesex County Agricultural Society.—This statement contains remarks on his mode of preparing the ground, setting and training the vines, and their general management.

### *Statement of John B. Moore.*

Aspect of the lot, a very slight inclination to the south; soil, light sandy loam, underlaid with a hard red gravel, full of cobble stones. In the year 1864 the wood was cut from this land, which had formerly been used as a rye field for many years, and was composed of a small growth of pitch pine, white birch and scrub oak. After the wood was removed the land would not have sold for more than fifteen dollars an acre.

The brush was burned and the lot plowed as well as possible, being full of scrub oak roots and stumps. and then planted for two years, principally with melons and squashes, and manured in the hill only.

In the spring of 1867 I planted on this lot five hundred Concord grape vines, one year old from the cutting, which have been trained on large stakes; also two hundred more of the Concord, and two hundred Hartford Prolific vines, which have been trained on a wire trellis. The Hartford Prolific vines were nearly ruined by the last two severe winters; although laid down and covered with soil, the tops came out all right in the spring, but the roots were mostly killed or injured by the severe freezing. I shall be obliged to remove most of them and plant Concord in their places.

When these vines were planted, in the spring of 1867, there had not been any manure applied to the soil, except the manure in the hills for melons and squashes, before mentioned, and which is the only manure that has been used on this lot up to the present time, except what I shall mention hereafter in connection with the strawberries raised between the rows of vines.

At the time of planting the vines the ground was plowed, harrowed, and made as fine and level as the remaining stumps and roots would allow, and then carefully planted in straight rows, ten feet apart, and seven from each other in the rows, where stakes were to be used to support the vines; between the rows I planted two rows of strawberries, which were allowed to run into beds. In the spring of 1868 the edges of these two beds were trimmed, which left two beds three feet wide, with a path on each side of them; from these beds I sold, in 1868, a little over \$400 worth of berries and plants, and the only manure or fertilizer that

was applied to them was a lot of ashes from a pile of stumps, gathered from the same lot, burnt, and spread where the strawberries were to be planted, and two hundred pounds of super-phosphate of lime sowed in the spring of 1868. In July of the same year, as soon as the crop of strawberries was gathered, the entire beds were plowed under. Since that time there has been no crop raised between the vines.

These vines have certainly been grown without animal manure; still, I would not have it understood that I would not use any manure, for I certainly should, if in my judgment the soil needed it. What the grape grower must have to produce the best crops of fruit, is a medium-sized, short-jointed, solid and well-ripened wood; excessive manuring does not give that, but rather a coarse, long-jointed, immaturity-ripened, soft, spongy wood; the first will produce an abundance of fruit, of good quality; the last, less fruit, and later in ripening; perhaps I should say that withholding manure would apply more particularly to the strong growing varieties, such as the Concord, Hartford, Diana, and most of the Rogers'.

Five hundred of these vines are trained on stakes, two arms and two stakes to each vine; one arm is coiled around each stake, and spur-pruned with rather long spurs, as the two buds nearest the old wood are often only leaf buds, and would not give fruit. This is the case with the Concord, more particularly than with other sorts. The rest of the vines are on wire trellis, and are intended to spread out as evenly as possible over the trellis; in pruning, I cut out a large portion of the old wood every year, and lay in new canes in its place. From these vines there were gathered one hundred boxes, of forty or more pounds each, or two tons of grapes, which were sold in Boston as soon as gathered, at twelve to thirteen cents a pound, in bushel boxes, without any particular packing.

I regard the grape as more certain to produce a crop than any other fruit we grow. During the last ten years there have been only two seasons in which the crop has not matured very well under good cultivation, and those (1867 and 1868) were only partial failures. Even in 1868, I averaged as high prices as the present year, although the fruit was not nearly as good in quality. Can that be said of any other fruit? It does not require much, if any manure, which is so much needed for the other crops on the farms; and to be a success it only requires ordinary skill in selecting the soil, and planting good, strong, healthy vines, of some well tried variety, like the Concord, which is the only kind I have found profitable. I have about exhausted the nurserymen's catalogues, and have been disappointed with many new kinds, coming highly recommended and costing high prices,



A wire trellis, with good post, well set, and three strands of the best galvanized wire, No. 13, costs about \$3 50 for one hundred feet in length. The same length, with stakes, would cost according to the size of the stakes; if they cost three cents each, with setting, it would be \$1.12 for one hundred feet; if seven cents each for very large ones, \$2.24 for one hundred feet; it requires much more labor to prune, tie, and take care of vines on trellis than on stakes. Which will produce the most, or best fruit in the end, is the question to be solved. I have only tried a trellis five years, so far, one is as good as the other, as far as cropping is concerned, with, as I have said before, a great difference in favor of the stakes in the amount of tying, pruning and care.—*Working Farmer.*

*For the Maryland Farmer.*

### THE JERUSALEM ARTICHOKE.

It is somewhat surprising, that with our people's love of ease, no more attention is given to such items of profit as do not require constant labor and attention. But a change is coming—this is the day of small things, and all these little matters will by and by, receive due attention. That I may contribute my mite to this end, I come now to speak of one of those items—the Jerusalem Artichoke, (*Helianthus tuberosus*)

Here is a plant valuable for several purposes, will grow almost everywhere, and does not require any cultivation after it is once planted. It will grow in old fields, if not too much shaded, in fence corners on ditch sides, in pastures, or anywhere a piece may fall. The tuberous roots make an excellent pickle, and is said to be very good cooked as potatoes. The dry stems answer well for pea-sticks, or for kindling fires. Sheep are very fond of the green leaves and stalks; and like the sunflower, it is one of those anti-malarial plants good to have growing around or near the premises.

But its chief value lies in its being such an excellent article of food for hogs. They are very fond of it, and will never cease rooting as long as one is to be found. Any one may easily test its value. Go now, during the winter, and plant pieces about here and there over an acre of any waste land that stock may not reach. Let it alone until the fall—then turn on your hogs and let them root. It will soon show its good effects upon the porkers, and next winter we reckon you will plant, not only one, but several acres. The rooting of the land by the hogs, and the decay of leaves and vegetation will rapidly improve the land.

B. W. J.

An exchange says: Tobacco stems are generally thrown away like shavings; they are worth more than straw or buckwheat stalks or clover as manure, as the plant is a great consumer of potash.

### The Pennsylvania Fruit Growers' Society.

The annual meeting of this association will be held at Chambersburg, Pa., commencing January 18th, 1871, at 7 o'clock, P. M. The executive committee informs pomologists that the present session will, in all probability, be the largest ever held by this society, as extensive preparations are being made to render it attractive and interesting. They greatly desire to have a fine display of winter fruit on exhibition, and therefore earnestly request contributions for that purpose.

An annual address will be delivered by the President. Election of officers, reports of committees, &c. An address by Wm. Parry, of New Jersey, on "Profits of Small Fruits," by Dr. J. S. Houghton, of Philadelphia, on "Budding the Grape," by Edwin Satterthwait, of Montgomery county, on "Pears."

In addition to the above, the annual report of the "General Fruit Committee;" report of the "Ad-Interim Committee" on the Small Fruit farms of New Jersey; Essay on "Insects injurious to the Apple," by Prof. S. S. Rathvon, of Lancaster, &c., will form prominent features during the session.

The following are the officers of the Society: Josiah Hoopes, President; Thomas Meehan, Corresponding Secretary; Alexander Harris, Recording Secretary.

### Spread the Truth.

Some medical men insist that it is undignified to advertise a remedy, however valuable it may be. Queer reasoning this. It is like saying that an article which the world needs should be hid in a corner—that benefits and blessings may be too widely diffused—that the means of protecting and restoring health should be a close monopoly, and not accessible to all. The argument is bad. It is worse than that; it is *inhuman*. Suppose Hostetter's Stomach Bitters—an absolute specific for dyspepsia, biliousness and nervous debility—had never been known beyond the *repertoire* of the faculty, what would have been the consequence? Instead of curing and invigorating millions, the good effects of the preparation would have been confined to a comparative few. There is the highest authority for saying that light should not be hid under a bushel; that whatever is excellent should be placed as a city on a hill, where all men can take cognizance of it. It is upon this principle that the Bitters have been advertised and continue to be advertised in every newspaper of any prominence in the western hemisphere, and that the spontaneous testimonials in its favor have been translated into all written languages. Thousands enjoy perfect health to-day who would be languishing on beds of sickness if the newspapers had not spread the truth with regard to this unequalled invigorant and corrective far and wide. Suppose profit has been reaped from this publicity. Is that any argument against it? If the public health has been protected; if lives have been saved; if the feeble have been strengthened and the sick restored, *great good has been accomplished*: and who so mean as to grudge to exertions thus directed their fair reward.

## Horticultural.

### ON PRUNING APPLE AND PEACH TREES.

The importance of giving more attention to the pruning of orchard trees, has been forcibly impressed on the minds of the majority of our fruit growers, by the abundant crops of apples and peaches in this section the past season. Those who had any part in the gathering and marketing the fruit, could not fail to notice the superiority of the product of trees that had been well pruned and cared for, as compared with the thick-topped and neglected trees, which compose the greater part of the orchards in most parts of the country. Then, too, the amount of labor and of wear and tear of clothing and temper in picking the fruit, is in much the same proportion.

It can be easily understood, therefore, that two objects are to be had in view in the operation of pruning—first the improvement of the fruit by the free admission of light and air to all the foliage, and second the improvement of the trees so as to facilitate the work of gathering the fruit. Fortunately both these objects are generally gained by the same operation. Those who have had experience in gathering orchard fruits, should thereby be well qualified to do the pruning; and now, while the recollections are fresh upon the mind, is a good time to set about the work, for it can be done advantageously at any time while the leaves are off the trees, and many farmers have more time for such work in the early part of winter than towards spring.

*Pruning of Peach Trees* is, if possible, more important than of apples, and is quite as badly neglected. The peach fruit is borne only on the shoots of the previous season's growth, and, unless the production of young shoots is secured by the healthy growth of the tree, good fruit cannot be expected. In order to secure a more plentiful growth of young wood, it is advisable to cut off occasionally a large portion of the tops of peach trees of bearing age, especially when their growth seems to be checked, and after bearing a full crop of fruit. This is called "heading them off," and consists of cutting off all the the limbs or branches at from one-third to one-half of the length, thus removing one-half or more of the tops. This will cause them to throw out new shoots and form new heads, with better foliage and finer fruit—especially if in the spring a dressing of ashes or manure is applied to the land, and fair culture bestowed.

Pruning of peach trees is usually deferred until spring, so as to give opportunity to observe the effect of the winter upon the fruit buds, as severer pruning is given when there is little or no prospect of fruit.

This heading off the tops of peach trees, where at all numerous, has heretofore been a pretty laborious and tedious operation, performed only with the saw and knife, or with the aid of ordinary shears. But a style of powerful shears has been invented the past year called the Giant Pruning Shears, manufactured by Yeaman and Chapman, of Clyde, Ohio, which I have tried in my orchard, and am convinced it will effect a saving of more than half the time and labor of pruning. It will remove, at a single cut, limbs of nearly two inches in diameter and leave a much smoother surface than the saw.—*Cor. Ohio Farmer.*

### Plan for Raising Water-Melons.

A correspondent in the Southern Cultivator, writing from Winnsboro, S. C., gives his mode for raising water-melons "down where the cotton grows":

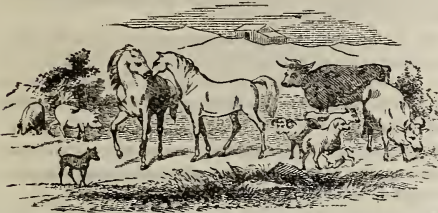
As I am very successful in raising water-melons, I thought I would send my plan. The spot of ground that you expect to plant, prepare well early in the spring, by plowing deep; the first of April lay off your hills eight feet apart each way, dig out holes 2 feet deep, 2 feet square; in each hole put half peck rotted cotton seed, half peck of hog-pen manure, and a table-spoon full of salt; mix well with a hoe, adding soil until you get the hole full up to 3 inches from the surface, then draw on light loose dirt until you get it level; do not elevate it, for by so doing, you cause them to die out when summer comes; draw your hoe around to form a furrow; plant half-dozen seed in a hill—soon as up, thin out to four, second hoeing thin to two. Continue to hoe them every four or five days, and just before the vines start to run, side with a plow, first one way, then the other; plow out first one way, then the other—I mean cross-plowing. In about ten days, give another plowing and hoeing. Continue to keep the ground loose just as long as you can do so without injuring the vines, for in no case should they be moved. Drive little sticks across the vines, thus: X, to keep the wind from blowing them about. By the above plan, I have gathered over 1000 melons from half an acre of ground, some weighing over 40 lbs.

### Orchards.

After selecting a dry, rolling piece of land, as large as you wish to set to trees, the first thing to do is to put a good and substantial fence-around the same, with a gate or pair of bars for entrance. The neglect of a good fence around the orchard, is an annual loss to the farmers of Michigan alone, of thousands of dollars. I passed a farm lately with three acres set to trees in the corner of a ten-acre lot, and I counted sixteen sheep, half that number of cows, and two colts feeding on the trees. This man makes an annual purchase of trees, but his orchard looks very sickly, and I think will never need any pruning; and the fruit it will bear will never overstock the market; when, with a good fence surrounding his trees, and with good cultivation, he and his family could have had an abundance years ago.—*Western Rural.*



## Live Stock Register.



### SELECTING STOCK RAMS.

In order to breed sheep successfully and profitably, much depends on the judgment used in selecting the rams to be used in the flock. It should be the aim of every farmer to endeavour to raise the standard of the stock on his farm, in an even and gradual manner, by using male animals of as much higher a degree of excellence each year as his means will afford. He must also keep in view a certain object in breeding. If he is so situated that he can profitably raise sheep solely for the purpose of turning into mutton, he will find his profit in using Leicester or Southdown rams of pure blood to put to common ewes. If wool is his object, he will find the use of Coltswoold rams best attain the end in view, as that class of wool not only commands the highest price, but is also more certain to be of uniform quality, and to yield a high average of weight of fleece throughout a flock.

We will suppose a farmer has a flock of ordinary common grade sheep, and desires to improve them. He can begin the first year by using a ram lamb or two, costing from \$10 to \$15 each. This will carry him through two seasons, by which time the ewe lambs of the first season will be gimmers, ready to take the ram. He should then get one of higher quality, say a shearling or two, costing \$20 to \$30 each. Two seasons after this he needs one of still higher quality, and of as good size as can be had, costing, we will say, \$50. After this he should change his rams every year, giving a good price to get a first-class animal from some well-known and reliable ram breeder. In all cases it is particularly advisable not to use as stock-getters in his own flock any of the male animals bred in it. All the ram lambs in the flock, not intended to be sold off as lambs, to the butcher, should be castrated, and raised as wethers until such time as the flock has reached the highest degree of excellence it is capable of attaining, when the ram lambs, if then good, may be kept for sale as breeding rams, and will probably bring good prices.

It is a poor policy to continue breeding and feed-

ing sheep that will realize but from \$3 to \$5 each from the butcher, when by a little extra outlay in the way of procuring male animals as stock-getters that will raise the standard of the flock, he can obtain from \$6 to \$10 each for what he has to sell, and in a year or two more, by perseverance, the flock can be raised to such a high standard as to readily command from \$12 to \$18 or \$20 each for what can be fed up for the Christmas or spring markets, or sold as breeding stock. It costs no more to feed such animals so as to keep them in good growing store condition than it does those of inferior quality. The great aim should be to obtain animals that combine good size and form with early maturity and aptitude to fatten, and in the case of wool growing, the animals that can carry the largest fleece of the true quality of the breed are the most profitable to keep.—*Canada Farmer.*

### Fattening Hogs---Thumps.

A correspondent of *Kent News* gives the following abstract of a discussion recently held by the Worton Agricultural Club of Kent Co., Md.

"On fattening hogs many excellent things were said, some of which I will give. It was held that it takes more food if the hogs are allowed to run, but the meat was firmer and weighed more for its apparent size than if confined. Corn soaked in water somewhat sa't went further and produced better results than dry corn. Oats mixed with the corn was a great improvement. The President remarked that he had received the best results from feeding oats to fattening cattle, the same quantity by measure fattening faster than meal or corn; he thought being remasticated caused the difference. The club agreed that corn fodder was the best litter for fattening hogs, as it does not get firm like straw and prevents the mange. An excellent cure for the "thumps" was given, to wit:  $\frac{1}{4}$  lb. "horse antimony," put in their swill three or four times a year. Another cure is Cayenne pepper tea in small doses. Too close breeding was considered to produce the thumps. Hogs if confined should have ashes, charcoal, or rotten wood, and should not be confined to corn alone, but should be allowed such refuse vegetables as can be afforded them, and should have a place to sleep in sheltered from the weather.

**LOSS OF CATTLE.**—Mr. James R. Jones lost two fine cows, Mr. James Pennington lost two, and Mr. John S. Newman lost two, a few days ago, near Millington, Kent county, Md., by allowing them to feed on husk fields too long without water.

He has hard work who has nothing to do.

## Tethering and Hurdling of Pasturing Cattle.

To the Editors of the *Maryland Farmer* :

The old practice of allowing cattle to roam over a whole field of clover or grass, and tramp it down and injure its future growth, does much harm in many ways, and ought to be abandoned. In England, Scotland and parts of Germany, horses and cattle put out to pasture are either confined to a small part of the pasture field by what is called a hurdle fence—or are tied by means of a rope or chain to some post fastened into the ground, and so allowed to eat or pasture off that portion of the pasturage only that is *within the range* of their rope, or *tether*, as it is called. I think our American farmers who desire preventing the wasting of clover and grass and the tramping down of soft mellow soils ought to adopt this European plan of pasturing animals.

But my main object in writing this is to enquire, what is the safest and *best way of tethering* a pasturing animal, so that he may eat freely and run no risk of getting entangled in and hurt by his tethering rope? and what is the best and cheapest *hurdle-fence* yet known in America—a movable fence for keeping pasturing animals within a small part of a field until they have eaten it off bare enough to need some other pasturage in the same field?

I would like to hear, through the *Maryland Farmer*, from those farmers who have had experience in these improved modes of pasturing animals.—The winter repose of the farmer is now at hand, and as our most experienced farmers have now plenty of time to write for our farm journals, I hope they will answer these enquiries for the common good.

A PENNSYLVANIAN.

December, 1870.

**THE SHOCKLEY APPLE.**—One peculiarity of this apple is, that it is better when grown upon the sandy soils of the cotton lands of South-western Georgia than it is in clay lands of higher latitudes.—*Southern Farm and Home.*

Corn gives warmth to the horse; therefore, where his work continues the same, give a little more corn as the weather becomes cold; but if the work falls off, as in winter, the feed of corn may be decreased.

Tile are always to be preferred for draining, but four-inch hemlock boards, nailed in V-shape, cost nothing but sledding work in winter, and will last twelve years, and often twenty-five.

Where vegetable manure has been long in the soil, held by clay and lime, there is your best soil for wheat. Now manure will make straw, but it will not stiffen or form a plump berry—the exceptions are when the year is unusually favorable.—Many a good wheat crop, heavy in straw, has been ruined by too much manure, and is so yearly.

## USEFUL RECIPES.

**HORSE REMEDIES.**—I send you three remedies for horses which are valuable. The liniment receipts have been sold many times at ten dollars each :

**Cure for Bots.**—Take eight ounces each of beeswax, mutton tallow and sugar, melt in one quart of new milk, put into a bottle and drench the horse while the solution is warm enough not to allow the wax to cool. Two hours later give physic.

**Horse Liniment.**—One-fourth ounce of white vitriol, one ounce sugar of lead, one ounce saltpeter, dissolve in one-half pint of wine or brandy.

**Nerve or Bone Liniment.**—One pint of alcohol, two ounces each of organum and oil of spike. One ounce each of sweet oil, spirits of hartshorn, and camphor gum; one-fourth ounce each of oil hemlock and sassafras; one ounce each of British oil.

If to be used upon human flesh, the two last ingredients should be left out. This is one of the most valuable liniments.—*Ohio Farmer.*

**FOOT ROT IN SHEEP.**—John Rogers, of Pa., in the *Practical Farmer*, says: Having some very bad cases of foot rot in my flock, contracted from sheep purchased out of a drove, I have had my own troubles, finding the disease very contagious. I have found sheep will contract it merely from walking on the same ground as the affected ones.

I have cured it entirely, first by having a hospital department and separating the well from the sick; secondly, by herding the sick at night under a shed, on the earthen floor of which was spread air slacked lime, to be renewed occasionally, and the excrement swept out daily; and third, by the use of butter of antimony. Each sheep was examined, and on any appearance of the disease, the hoofs were pared close even to the quick, so there would be no harbor for the disease, which is readily discoverable by the smell. A feather was then dipped into the bottle of butter of antimony, and applied freely. I do not know why this is better than other caustics, and only know that it is better, and has cured my sheep thoroughly in a few applications.

The following we glean from the *American Stock Journal*:  
**WORMS IN HOGS.**—The most efficient means of combating worms is by the use of drastic purgatives, which, however, to be successful, require caution in their administration. Common salt mixed with their food will, in some instances, speedily exorcise the worms; should it not do so, turpentine may be given which will eradicate them.—It must not be supposed from the fact that no worms are seen to come away from the hog, that the medicine is not doing its proper office, as many of them die in the intestines and go through the same process of digestion as the food.

**ASTRINGENT POWDER FOR SHEEP.**—Take prepared chalk, a quarter of an ounce; ginger, half a drachm; catechu, powdered, half a drachm; powdered opium, two grains. Give this in a little gruel once or twice daily until the purging abates.

**COLIC IN HORSES.**—Take two tablespoonfuls of mustard, the same amount of gum powder, the same of soda, and one tablespoonful of laudanum, put all in a pint of good whiskey. Put it in a quart bottle, shake well, then add enough water to fill up the bottle. With this drench the animal, and if it should not relieve in the course of thirty minutes, then give another dose.

**MOULTING FOWLS** should have a few nails placed in the water furnished for their use. The rust occasioned by the nails renders them less liable to disease.



## Ladies Department.

### ROOM WITH THE ANGEL-BAND.

When the dewy light was fading  
And the sky in beauty smiled,  
Came a whisper, like an echo,  
From a pale and dying child:  
"Mother, in that golden region,  
With its pearly gates so fair,  
Up among the happy angels,  
Is there room for Mary, there?"

"Mother, raise me just a moment;  
You'll forgive me when I say  
You were angry when you told me  
I was always in your way;  
You were sorry in a moment,  
I could read it on your brow,  
But you'll not recall it, mother,  
You must never mind it now.

"When my baby-sister calls me,  
And you hear my voice no more;  
When she plays among the roses  
By our little cottage door—  
Never chide her, when you're angry,  
Do it kindly and in love,  
That you both may dwell with Mary,  
In the sunny land above."

Then she plumed her snowy pinions,  
'Till she folded them to rest,  
'Mid the welcome song of rapture,  
On her loving Saviour's breast.  
In the bright and golden region,  
With its pearly gates so fair,  
She is singing with the angels,  
There is room for Mary there.

### A HUSBANDS' CONFESSION.

I never undertook but once to set at naught the authority of my wife. You know her way—cool, quiet, but determined as ever grew. Just after we were married, and all was going on nice and cozy, she got me in the habit of doing all the churning. She never asked me to do it, you know, but then she—why it was done just in this way. She finished breakfast one morning, slipping away from the table, she filled the churn with cream, and set it just where I couldn't help seeing what she wanted. So I took hold regularly enough, and churned until the butter came. She didn't thank me, but looked so nice and sweet about it that I felt well paid. Well, when the next churning day came along she did the same thing, and I followed suit and fetched the butter. Again, and it was done just so, and I was regularly in for it every time. Not a word was said, you know, of course. Well, by-and-by this became rather irksome. I wanted she should just ask me, but she never did, and I couldn't say anything about it, so on we went. At last I made a resolve that I would not churn another time unless she asked me. Churning day came, and when my breakfast—she always got nice breakfasts—when that was swallowed there stood the churn. I got up, and standing a few minutes, just to give her a chance, put on my hat and walked out doors. I stopped in the yard to give her a chance to call me, but not a word said she, and so with a palpitating heart I moved on. I went down town, up town, and all over town, and my foot was as restless as Noah's dove—I felt as if I had done a wrong—I didn't exactly know how—but there was an indescribable sensation of guilt resting upon me all the forenoon. It seemed as if dinner time would never come, and as for going home one minute before dinner, I would as soon cut my ears off. So I went fretting and moping about until dinner time. Home I went, feeling much as a criminal must when the jury is having in their

hands his destiny—life or death. I could not make up my mind how she would meet me, but some sort of a storm I expected. Will you believe it? she never greeted me with a sweeter smile—never had a better dinner for me than on that day; but there was the churn just where I left it! Not a word was passed. I felt cut, and every mouthful of that dinner seemed as if it would choke me. She did not pay any regard to it, however, but went on as if nothing had happened. Before dinner was over I had again resolved, and shoving back my chair I marched up to the churn and went at it the old way. Splash, drip, rattle—I kept it up. As if in spite, the butter never was so long in coming. I supposed the cream standing so long had got warm, so I redoubled my efforts. Obstinate matter—the afternoon wore away while I was churning. I paused at last from real exhaustion, when she spoke for the first time: "Come, Tom, my dear, you have rattled that buttermilk quite long enough, if it is only for fun you are doing it." I knew how it was in a flash. She had brought the butter in the forenoon, and left the churn standing with the buttermilk in for me to exercise with. I never set up for household matters after this.—*Copied.*

### Buckwheat Cakes.

Few dislike this pancake, if properly made. My experience teaches that not many understand this inexpensive delicacy, for delicacy it is. The friend who taught me how to make them commenced her lesson with—

"Not any yeast-made pancakes for me. They are good enough, perhaps, but can't compare with a golden-hued, buttermilk buckwheat pancake. See! I take a quart of buttermilk without a drop of water in it. Didn't I rinse down my churn? No, I scraped the butter down with a spoon, to keep it rich, you know. Now I put in a teaspoonful of soda and one of salt; then I dip five handfuls of flour, so big, and then stir till mixed, and no longer. If you keep stirring and adding now a little flour and then a little more milk, you will find your dough stringy and cakes tough. All kinds of pastry that are required to be tender and delicate, must be manipulated as little as possible.

"Don't think of setting the table during the operation of frying. Have that all done first, and merely get a good start before you ring the bell. You need not have a disagreeable smell of burnt fat accompanying the operation, unless you wish to waste it. A large square of fat pork is best, I think, with the fat on; skim it lightly over the griddle, though, and when through trim off the soiled-looking part, and it will do many times. I never turn a cake over twice, and I don't let it get cooked through before I turn it. Pop the cakes under cover quickly; steaming a minute is the cap of perfection, but see that the lid does not bear on them heavily."—*Country Gentleman.*

### Marriage.—Milton.

Here Love his golden shafts employs, here lights  
His constant lamp, and waves his purple wings,  
Reigns here and revels: not in the bought smile  
Of harlots, loveless, joyless, unendear'd,  
Casual fruition; nor in Court amours,  
Mix'd dance, or wanton mask, or midnight ball,  
Or serenade, which the starved Lover sings  
To his proud Fair, best quitted with disdain.

### Love.—Pope.

Oh happy state! when Souls each other draw,  
When Love is liberty, and Nature law:  
All then is full, possessing and possess'd,  
No craving void left aching in the breast:  
Even thought meets thought, ere from the lips it  
part,  
And each warm wish springs mutual from the  
Heart.

## SOMETHING ABOUT BREAD-MAKING.

A subject that interests everybody is that of bread making, and, as a general thing, there is too much popular ignorance respecting it. In the process of grinding wheat for superfine flour, the outer shell, composed chiefly of gluten, being tenacious and adhesive, comes from the mill in flakes with the bran, and is sifted out, while the starch is pulverized and constitutes the fine flour. Thus the starch, which is the chief element in fine flour, is saved, which contains no food for brain and muscle; and the gluten, containing phosphates and nitrates which furnish support for brain, bone and muscle, is cast away with the bran, and is fed to horses, cattle, and pigs. And this is the kind of flour that makes nine-tenths of the bread in American cities, besides all that is used in cakes, puddings and pastry.

A method of making bread from whole wheat, without previously grinding it into flour, has been devised by a Frenchman named Sezille. The grain is first soaked in water for half an hour; then put into a revolving cylinder with a rough inside surface, and shaken up, so as to remove the coarser part of the skin, and then soaked twenty or twenty-four hours more in water of the temperature of 75 degrees Fahrenheit, with which a little yeast and glucose has been mingled. By these means the grain acquires a pasty, doughy consistence, and can be mixed up by machinery and made into bread in the usual way. The invention is an important one, both from its saving the expense of grinding, and from the greater economy of keeping and transporting the whole grain instead of flour.

## A HEALTHY BREAD.

The most economical and best bread, especially in cold weather, when a hot fire is constantly kept, is what is sometimes called gems, or unleavened biscuit. For this purpose a group of cast-iron pans or cups,  $2\frac{1}{2}$  by  $3\frac{1}{2}$  inches each, all made in one casting, is used. These pans are set on the top of a hot stove, and allowed to become almost smoking hot when buttered for use. Then with cold water and milk, half and half, or with cold water alone, and the colder the better, mix and stir quickly with a stiff spoon as much Graham or unbolted wheat meal as will make a stiff batter or thinnish mush; and when the pans are hot, fill them quickly with the thin dough and let them stand a minute on the stove before putting into a very hot oven, where they should remain twenty or twenty-five minutes, until done. If the mixture be neither too thin nor too stiff, and the pans and the oven be hot, you will have twelve as light and wholesome biscuits as any epicure could wish to eat. They may be eaten smoking warm from the oven, as they contain no poisonous chemical elements like yeast bread, which requires cooling to be rid of. They are good cold, or may be warmed in a steam kettle. Anybody, however unskilled in cooking, can learn to make these light and nice every time. Nice, fresh wheat-meal, very cold wetting, quickly done, with a very hot place to bake them, will insure the best of "luck" always. These, like all other Graham bread, should be fresh every day.

For growing children, and those people who work or think, and especially students or sedentary persons, there is no other bread, and scarcely any other single article of food, that equals it. Let the poor who cannot afford to lose fourteen per cent. of the grain in the cast-off bran; let those whose bones and muscles are small, tending to rickets and spinal curvature; let invalids and dyspeptics try it, and they will never go back to superfine bread simply because it looks white and nice, and, when dry, is more pleasant to the mouth than the brown.

A grain of prudence is worth a pound of craft.

## DOMESTIC RECIPES.

**FARMER'S PUDDING.**—Take one pint of bread crumbs, and quart of milk, half a cup of sugar, four eggs, taking only the yolks, butter the size of a walnut, one lemon, grated; bake until done, but not watery; then spread a layer of currant-jelly or any preserved fruit over it. Take the whites of the eggs and sugar, in which has been stirred the juice of the lemon, beat to a stiff froth, pour it over the pudding, and brown it. Serve cold with cream. It can be made without a lemon. Flavor with nutmeg.

**RAISIN PUDDING.**—Soak two ounces of raisins in enough brandy to cover them. Take half a pound of flour, half a pound of chopped suet, a dessertspoonful of ground ginger, two eggs, four ounces of white sugar, and enough milk to make it a pretty light paste; add the raisins and brandy, put it into a cloth or basin, boil it for two hours, and serve with what pudding sauce you please.

**BOILED RAISIN PUDDING.**—Mix together half a pound each of stoned raisins, chopped suet, and bread crumbs; add four well beaten eggs, a teacupful of milk, a little salt, and a spoonful of grated ginger. Boil it for four hours in a buttered mould or floured cloth. Pour a little brandy over it before serving.

**FARMERS' PIE.**—Grate a good sweet pumpkin; add to it sufficient milk to thin it like custard; add four eggs, one teacupful of sugar, or sufficient to sweeten it to your taste; add a little ground cinnamon and a little cinnamon water; mix all well together; make a crust like for pies, fill your shells, sprinkle them over thickly with pulverized cinnamon. Bake with a moderate heat.

**COLD CUP PUDDINGS.**—Grate the rind of a lemon into a pint of cream (or new milk), let it just boil, and strain it. When cool, beat the yolks of six eggs, and add them to the above, with crushed lump sugar to sweeten it. Pour the mixture in six cups, and steam for half an hour. Next day turn out and garnish with currant-jelly or other preserves.

**BREAD PUDDING.**—One pint of grated bread crumbs, one quart of milk, yolks of six eggs, well beaten, one grated lemon, and sugar to taste. Bake. When cold spread a layer of jelly over the top, then make an icing of the whites of the eggs and white sugar, and spread smoothly over the jelly. To be eaten cold without sauce.

**CRUST FOR SAVORY PIES.**—To two pounds of flour, one and a half of butter or lard, and the yolks of three eggs; rub part of the fat to a cream with the eggs, then rub in the flour; wet with cold water, and roll out with the remainder of the butter. This crust is suitable for pigeon, rabbit, hare, and other savory pies.

**CUSTARD CREAM PIE.**—This is baked like a custard, but to be very nice, the edge of the plate should be layered with puff-paste; make a custard of thin cream instead of milk; and bake it as a custard. It must be eaten the same day it is baked.

**RICE PUDDING.**—To one cup of boiled rice add half a cup of butter, five eggs, sugar to taste, and cream enough to make it liquid. Flavor with essence of lemon, and bake in rich paste in deep pudding dishes.

**EGG PUFFS.**—Six eggs, one pint of milk, three spoonfuls of flour, four ounces of butter melted, and a spoonful of yeast; mix, and fill cups half full; bake fifteen minutes; wine sauce.

**FLOUR PUDDING.**—Four spoonfuls of flour, six eggs, two pints of milk. Line a basin with buttered paper, and boil an hour.



## The Florist.

### FLORICULTURE---FOR JANUARY.

PREPARED BY JOHN FEAST, Florist, Baltimore.

This being the birth of a New Year, let us hope it may be a prosperous one, rewarding the industrious who toil in the cultivation of the soil, commensurate with the labor expended, at the same time feel thankful for past favors bestowed, and trusting, in the future, to a kind and beneficent Providence who will reward those who avail themselves of his many bounties. Even at this season no one need be idle, for a wide field of labor is before him, in the necessary preparations for the spring. As the season advances his duties multiply, but now only such work can be done as preparing compost heaps, and pruning of trees, shrubs and grapes, and clearing away all the superfluous material that has accumulated during the Fall, and having in readiness every thing needed for the putting up frames or hot-beds, for the sowing of early seeds,—have collected manure, mixed with leaves, &c., and lay several days before the seed are sown, not to be decomposed, as many seeds are destroyed by this neglect, and fault found that they are worthless—better too little heat than too much.

The Greenhouse will now begin to look gay with Camellias, Azaleas, Daphnes, and other wintering plants. Keep a regular temperature night and day—give plenty of air in fine weather—syringe and fumigate, to keep free from aphides that may infest them;—have all neatly arranged, and in order, giving plenty of room to secure good specimens.—Carefull watering, with guano or other liquid water occasionally, will keep the collection in fine condition.

The propagation of different kinds of plants now under way will require transferring to separate pots, as Verbenas, Geraniums, Roses, and all bedding out plants for the spring. Keep the warmth up until they begin to take root—this will save many from perishing.

Stove Plants, as Begonias, Coleas, Marantas, and such, require more heat, and if you have only one house this can be done by placing them at warmest end of the house. Geraniums that have been headed down are now growing, and are to be encouraged by placing them near the glass, if possible; those in bloom will need your attention; do not let them suffer for water,—those having made little growth will require but little water for some time, as too much is injurious.

Cinerarias, Calceolarias, and all soft wooded plants require the greatest care in keeping clean; they are at times so infested with one thing or another, that they are liable to be destroyed—when affected, use every means to clean them, otherwise no bloom can be expected.

Greenhouse Bulbs—as Sparaxis, Ixias, Amyrillus, place near the glass—encourage those wanting larger pots, and such as are dormant at this time, keep dry until the season to pot. Hyacinths, in pots, need plenty of water when in bloom, and to be kept near the glass.

Cape Plants—as Metrosederas, Myrtles, Ericas,

Epacris, Coreas—should be kept quite cool; they will flower much finer than by being kept growing; have all tied up neatly, give plenty of room, and a top-dressing of good soil, if required.

Cactus, at this time, except those flowering, require to be kept dry, and on showing signs of growth, grafting may be performed.

Plants in Cold Frames,—as Violets, Carnations, Primroses, and Auriculas, should be protected well from the frost; give plenty of air on fine days, to dry up the moisture, which is death to them, if left to long closed. They require very little water at this season, and with due care a fine bloom of Auriculas or Swiss Primroses, with their variegated colours may be obtained in the spring.

### ROSE OF SHARON.

The rose of sharon is one of the most exquisite flowers in shape and hue. Its blossoms are bell-shaped, of many mingled hues and dyes, and its history is romantic in the highest degree. In the East, throughout Syria, Judea, and Arabia, it is regarded with the profoundest reverence. The leaves that encircle the round blossom dry and close tight together when the season of blossom is over, and the stock withering completely away from the stem, the flower is blown away at last from the bush on which it grew, having dried up in the shape of a ball, which is carried by the sport of the breeze to great distances. In this way it is borne over the sandy wastes and deserts, until at last, touching some moist place, it clings to the soil, where it immediately takes fresh root and springs to life and beauty again. For this very reason the Orientals have adopted it as the emblem of the resurrection. The dried flower is placed by the Judeans in a vase of water beside the beds of sick, and if it expands by moisture, the omen is considered favorable. If it does not, the worst at all times is feared.—*Ex*

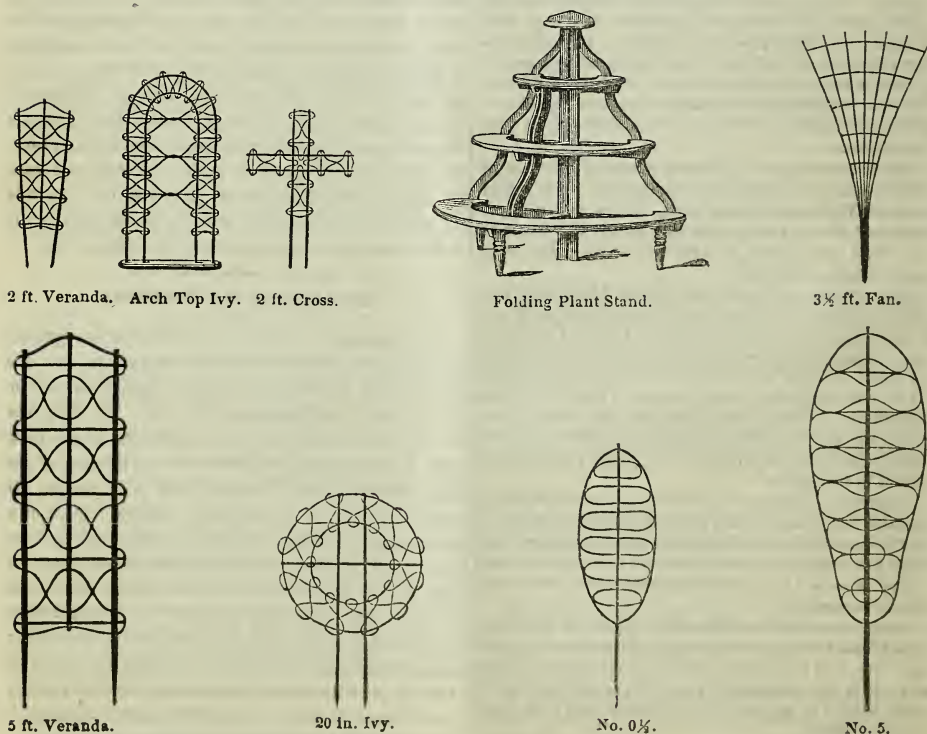
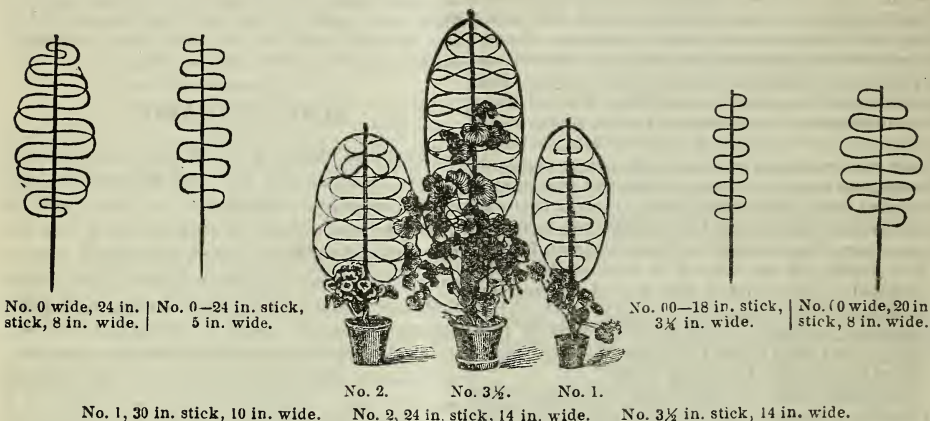
### Evergreens for Windows.

The *Gardeners' Magazine* says that the evergreens which thrive best for windows, back yards, &c., are the Aucuba, Rhododendron, Box, Euonymus, Arbor Vitæ, Holly, and Evergreen Privets. All the kinds of ivy are suitable, but the commonest kinds look very well if properly trained from the bottom of the pot outwards, and if allowed plenty of water. If the plants are on the outside window sills, put a little chip or wedge under the pots, so as to keep them level, or else you cannot water them properly; also, fix in the joints of the wall strong nails half way up the plant, then get some thin copper wire and fasten it to the nails from one side to the other; this prevents the wind from blowing the downum. The copper wire is easily undone and put back again when required, and will last with care for years.—Iron wire lasts only once or twice, as it breaks.

## POT PLANT, GARDEN AND VERANDA TRELLISES.

The cultivation of Plants, Shrubs, Vines, &c., has become so universal that a large demand has been created for light and tasteful frames or trellises upon which to train them.

We present below to those who are fond of the beautiful in flowers and vines, a series of cuts illustrating a variety of Pot Plant, Garden and Vine Trellises, and invite the attention of amateurs or professional florists to them, as being admirably suited for the purpose, and can be sold at an extremely low price by E. Whitman & Sons, Baltimore, Md.





## STATE IMMIGRATION CONVENTION.

Pursuant to a call signed by Bernard Gilpin, President of the International Emigrant Union, Robert T. Banks, Mayor of the city of Baltimore, and Dr. William S. McPherson, State Commissioner of Agriculture, a Convention assembled in Raine's Hall, Baltimore, on Tuesday, December 13th, for the purpose of discussing and promoting the objects set forth in the call. About two hundred and fifty delegates were present, representing nearly all the counties in the State and Baltimore city.

Hon. Robert T. Banks called the convention to order and nominated Gov. Oden Bowie as temporary chairman, and J. Tillard Smith, Joseph E. Merryman, F. S. Hoblitzel, as secretaries, when on motion, the call for the convention was read.

Col. M. S. Hess, of Baltimore city, then moved that a committee, consisting of five, be appointed on Credentials, and to nominate permanent officers of the convention, which was adopted, and the Chair appointed the following: Col. M. S. Hess, of Baltimore city; Hon. James T. Earle, of Queen Anne's; Hon. G. H. S. Key, of St. Mary's; Sprigg Harwood, of Anne Arundel, and J. A. Ritter, of Frederick.

After an absence of half an hour, the committee on permanent organization reported the following nominations, which were unanimously confirmed:

*President*—Hon. Oden Bowie.

*Vice Presidents*—Hon. H. G. S. Key, of St. Mary's; Bernard Gilpin, Hon. Robert T. Banks, Col. F. Raine, of Baltimore city; Hon. James T. Earle, of Queen Anne's; and A. Bowie Davis, of Montgomery.

*Secretaries*—Dr. Morris Weiner, F. S. Hoblitzel, and J. Tillard Smith.

The Committee on Business reported they would not be prepared to report until 8 o'clock in the evening, when the convention adjourned over.

George H. Pagels, Esq., chairman of the Committee on Business, presented the following report:

The Committee respectfully report the following conclusions upon the questions submitted to them:

Whereas, It has become of the greatest importance to the State of Maryland to give a practical direction to the development of the resources of the State, and to bring our lands into the market, and to encourage immigration, the committee hereby recommend the continuance and support of the International Immigrant Union, as a central organization, with branches in the different counties of the State, to act in concert with the main body, the President of each branch association to be, by virtue of his office, a Vice President of the International Immigrant Union; the county organizations to control their own affairs, when those are of a strictly local character; and the citizens of Maryland are urged to become members of the central organization as well as of those instituted in the counties.

Your committee further recommend that the branch associations report once in three months, or as often as may be deemed proper, to the central organization in Baltimore, and to give such information as may be promotive of the objects in view.

Your committee further recommend that a committee of three be selected by the President of the Convention, to prepare an address upon the subject of agriculture and other resources of the State, and the encouragement of immigration, to be presented to the people, and the next Legislature of Maryland, with a view of promoting the objects of this Convention.

Frederick Raine, Esq., then addressed the Convention as follows:

"The object for which we meet to day is two-fold. First ly, to circulate abroad a better knowledge of the lands for sale in our State, and secondly, to popularize immigration to Maryland. Through the Department of Labor and Agriculture, the International Emigrant Union and the different benevolent societies in our midst, a great deal has been done already in this direction, but it is, notwithstanding an undeniable fact that the results thus far attained are by no means adequate to what is desirable for the development of the resources of the State.

Thousands of acres are still unproductive, mainly because no practical system existed to advertise them so that agriculturists in our State and abroad might form a correct estimate of their value for profit and development, while at the same time an indifference, very much to be regretted, has shown itself to divide large tracts of land and make the latter attractive to agriculturists of limited means. Climate, location, cheap communication with excellent markets—everything favors us, but for the purpose of reaching beneficial results it is necessary that we should throw aside our former apathy and enter into the field of competition with our neighbors

and more distant States, with the firm determination to do something for our country, not by complaining that we are behind hand, but by stepping forth boldly and determinedly and to proclaim to the world that we have the land and that we can dispose of the same, and are willing to do so to the thrifty or energetic of our own country and from abroad. In every direction we behold renewed energy to further the prosperity of the land, and let us step out in line with others and the blessings which they enjoy will soon reach us and our beloved State. The possession of the large tracts of land is an empty honor unless the same are tilled and made productive. I am sure many land owners in our State would sell willingly at a very reduced price, a portion of their possessions to attract agriculturists to populate their thinly inhabited districts, and give full impulse to the development of the State. With regard to the questions of immigration from abroad, it is but too evident that the same must be popularized—that is, Immigration must be better appreciated and more thoroughly encouraged than has been the case heretofore. Prejudice must be thrown aside, and the new-comer valued according to his worth and the toil of his hands. The parceling of large tracts of land, low prices for the same, will go naturally hand in hand with the popularization of immigration. I am opposed to sending expensive agents to Europe or to any other place to persuade immigrants to come here; the attraction to come to Maryland must emanate from ourselves, must find its inducement in the practical propositions and offers which we make to those whose labor and whose settlement here we desire.

Let us form an organization in our State, or go into any other institution already existing in our midst, to carry out the objects of this Convention. Let us build up the organization with our private means, by casual contributions from each person joining the same. Let the agitation be spread from one end of the State to the other, and let us ask all to give it their help and their counsel, with the centre of the organization in Baltimore, and a branch in each county of the State with a living messenger."

After considerable debate the report of the committee was adopted—and the President appointed Frederick Raine, Esq., Dr. S. McPherson and Dr. George R. Dennis, as the committee.

Hon. Jas. T. Earle, offered a resolution to appoint a committee, consisting of one from each county, and three from each Legislative district of the city of Baltimore, to memorialize the Legislature for an appropriation of \$200,000 to pay the passage of immigrants to the State of Maryland, and to provide for agents in Europe and in Baltimore.

After a protracted debate, participated in by Messrs. Earle, Clarke, Key, Marbury, Smith, Sands, Fowler, Hammond, Martin, Johnson, Bannon, and others, the resolution was adopted, whereupon the chair appointed the following committee: Jas. T. Earle, Chairman; Allegany, M. Treiber; Anne Arundel, L. Giddings; Baltimore, John Wethered; Baltimore city, John R. Blake, Dr. Wm. H. Baltzell and Wm. T. McDaniel; Caroline, Richard Carter; Carroll, Wm. A. McKellip; Cecil, Jacob Toms; Charles, Wm. B. Matthews; Dorchester, Dr. Wm. R. Hayward; Frederick, James H. Gambrill; Harford, Dr. John C. Polk; Howard, James A. Gary; Montgomery, George Peter; Prince George's, Colonel John H. Waring; Somerset, Dr. Wm. Gore; St. Mary's, Colonel John H. Dent; Talbot, Colonel E. Lloyd; Washington, A. K. Seyster; Wicomico, Colonel Wm. J. Leonard; Worcester, Colonel E. K. Wilson.

On motion the convention adjourned, subject to the call of the president.

**BROOM CORN SEED.**—Says Mr. H. L. Reade, of the Hearth and Home: Unquestionably the best way to dispose of broom corn seed is to feed it to fowls. The next best mode is to give it to sheep; they are fond of it, and fatten upon it nearly as fast as on Indian corn. Ground with corn, rye, oats, or barley, it is profusely fed to cattle, and when mixed with wheat bran it is good for milch cows. The Shakers frequently feed it to horses, and at this season of the year when this grain is not only abundant, but at hand, they use it exclusively. My judgment is that with corn at 90 cents, oats 48 cents, and rye 80 cents, for grinding and feeding to cattle, broom corn seed is worth between 50 and 60 cents a bushel, although it would be more valuable to dispose of in some other way.



## BALTIMORE AND OHIO RAILROAD.

**Meeting of the Board of Directors---Re-election of John W. Garrett, Esq.---Synopsis of his Remarks---Policy of the Company.**

The regular monthly meeting of the board of directors of the Baltimore and Ohio Railroad Company took place on Thursday, December, 22d at Camden station. The gentlemen who were unanimously re-elected directors by the stockholders at their annual meeting last month, appeared and qualified, and took their seats. After the organization of the board the president withdrew, calling Dr. George Dennis to the chair.

On motion, the board proceeded to the election of the president, when Mr. C. Oliver O'Donnell nominated Mr. John W. Garrett.

On motion of Mr. Pendleton, it was resolved that Mr. Johns Hopkins be requested to cast the unanimous vote of this board for Mr. Garrett as president for the ensuing year, which motion was adopted.

The chair then appointed Messrs. Hopkins, O'Donnell and Smith a committee to inform Mr. Garrett of his election.

The committee waited upon Mr. Garrett, and after a short absence returned, accompanied by the president elect.

Upon taking the chair, Mr. Garrett delivered an address, in which he stated his appreciation of the high honor conferred upon him by the unanimous vote of the board in calling him, for the thirteenth year, to the presidency of the company. He referred to the fact that the period during which he had acted in this capacity was one not always of fair weather and smooth seas, but the company had often encountered severe tempests and great perils. In the early part of his administration the directors of the State of Maryland, of the city of Baltimore and of the stockholders were frequently divided.

It had been his aim to pursue under the auspices of the board, such a policy as would prove to *all* interests that the objects of the management were, whilst properly protecting the great capital invested and thus securing the relief due, by just returns on that capital to the taxpayers of the State and the city and to shareholders to inaugurate, and to assist, in the interests of the public, the numerous great enterprises which have tended so much to develop the wealth of the city of Baltimore and our State, and of the vast territories which have been embraced through the connection of the Baltimore and Ohio railroad. He would do injustice to his strongest feelings were he to fail to express his gratification that his efforts had been so far successful, as was shown by the unanimous vote which had just been announced recalling him, as in previous years, to the executive chair.

It was an evidence that the policy of the board—broad, liberal, comprehensive—had been appreciated by the constituencies represented here, and was calculated to insure the successful prosecution of the great works that are yet to be accomplished.

Whilst the Washington County road, the Winchester and Strasburg road and the Parkersburg Branch road had been completed; whilst the Central Ohio and Lake Erie divisions, and the Marietta and Cincinnati road had been so largely improved and were prepared for the increasing business which is being commanded through these routes; whilst on yesterday the last channel-span of the great bridge over the Ohio river at Parkersburg had been closed; whilst that entire structure, as well as the similar grand and costly bridge at Benwood, would be soon completed; whilst the Pittsburg and Connellsville road—an enterprise of vast significance and power, through which a volume of prosperity would flow upon our city, would in a few weeks be opened—yet much remains to be done.

The very facts of the vast growth of the commerce of Baltimore and of the successful extensions of the Baltimore and Ohio road create necessities for new and additional routes and outlets. He therefore fully recognized the onerous nature of the duties which he consented again to undertake.

When the fruition of the great business of the road to Pittsburg is about being realized the importance of a continuous line through that city to Chicago becomes more palpable. The city of New York has derived an immense portion of its wealth from the trade of the North-west. The North-west, by availing of this most economical route, can add largely to its prosperity and power. Arrangements are in process by which the early construction of this great line will be undertaken.

The heavy and costly work upon the Metropolitan Branch road is being rapidly pressed, and it is hoped that this short and strong line, so interesting and important to the national capital, will be completed within nine months.

The Valley railroad, of Virginia, through which results can be achieved most desirable and important to all interests connected with that line, should be vigorously prosecuted.

Baltimore and Washington possess the advantage of the use of the important Virginia North and South Trunk road, the Orange, Alexandria and Manassas, extending from Alexandria to Lynchburg, 170 miles. It is of special importance to the trade of Baltimore that this road shall be extended from Lynchburg to Danville. It was unfortunate that the wise action of the city council in aid of this road was defeated chiefly by the active and illegitimate interference with the election in Baltimore of hostile Pennsylvania railroad interests.

The object of these parties is to arrange to control southern business, and by passing it by a tunnel through Baltimore use their power and connections to force the trade over their lines in the interests of rival cities. It becomes, therefore, of grave moment, in order to preserve the true geographical relations of Baltimore in a contest for southern business, that the road from Lynchburg to Danville shall be built; and it will be proper to extend aid for this valuable object. By that road, connections will be opened with the railways of North and South Carolina, Georgia, Florida, Alabama and Mississippi.

By effecting these connections the Baltimore and Ohio Company can maintain the interests of the commerce of Baltimore city, and by framing its tariffs so as to give the proper rates of transportation proportionate with distance, compel the Pennsylvania road, after it has expended money in the South, as it has compelled that road, through its Northern Central branch, to work under our influence, and control at such reduced rates to Baltimore in order to compete as to subordinate its schemes and plans and force it most unwillingly to aid us in promoting the interests of Baltimore. Heretofore this company has succeeded not only in maintaining such low rates to western points as to increase business vastly, but has forced the Pennsylvania road to maintain a uniformly large difference of rates in favor of Baltimore, and against its own nominal terminal city, Philadelphia.

The Lynchburg and Danville company will soon be prepared to present a programme under which it is hoped the work upon that extension can be soon commenced.

Mr. Garrett had the satisfaction of stating to the board that a first class line of steamships had been organized and was now in operation between Liverpool and Baltimore. A few weeks since it became desirable for the Baltimore and Ohio Company to order the shipment from Liverpool of 2,000 tons of steel rails by steamers. These shipments formed the basis for two cargoes, viz., of the steamships Ottawa and Caspian. These fine steamships are now on their way to this port. They are owned by the Messrs. Allan, of Montreal and Liverpool, who control a fleet of twenty-three first-class iron steamships. The Hon. Mr. Hugh Allan has recently visited our city, and after examining its advantages and relations with the West and South, determined to instruct that for the purpose of testing the route, a fortnightly line should be established. The first class steamers of the Messrs. Allan will therefore hereafter sail regularly every two weeks from each side.

It is proper to add that the Oceanic Steamship Company desires to make arrangements also for a line between Liverpool and Baltimore, and it is probable that this enterprising company will build a number of superior steamers to form a permanent Liverpool and Baltimore line.

The rapid development of the commerce of Baltimore must soon demand that a first-class ship canal be constructed to unite the waters of the upper Chesapeake with those of the Delaware bay. In view of the vast regions North-west, West, South-west and South which are using, and to a continuously increasing extent, Baltimore as their entrepot, the economy that can be effected by this canal makes the enterprise one of national importance.

Baltimore enjoys striking advantages for coastwise commerce with the Southern States, with the West Indies and with South America. If, by the construction of a canal of but twenty miles in length, more than twenty-four hours' navigation can be economized in another and extensive branch of commerce the work must be undertaken at no distant period.

As showing the effect of the combinations of the Baltimore and Ohio Company the president stated that the revenue for the past month of the road and its branches was \$1,475,355 72.

Mr. Garrett, in closing stated that from that strength which is the result of union and vigorous co-operation, he trusted all the valuable enterprises to which he had referred would be accomplished.

The board then adjourned.



## THE MARYLAND FARMER.

### BOOKS, MAGAZINES, &c.

**Godley's Lady's Book Receipts and Household Hints.**—We have received from the Baltimore News Company a copy of this very complete and valuable Receipt Book. It contains 450 pages of receipts and hints, carefully selected and compiled from the best receipts published from time to time in the Lady's Book. They are all from the practical experience of old housekeepers, and have all been carefully tested before publication. It is equal to any book of the kind yet published, and should be in the library of every housekeeper. Price \$2. Published by Evans, Stoddard & Co., Philadelphia.

**Caldwell's Treatise on Hedging.**—This valuable treatise on hedging is written by Joseph A. Caldwell, Delaware county, Ohio, a gentleman of large experience, and published by H. N. F. Lewis, editor of the *Western Rural*, Chicago, Ill. It is a history of hedging, giving a complete theory of its culture, the nature of the osage orange as a hedge plant for different soils and climates, economy to farmers, giving the laws in regard to hedging in the different States, &c. Price \$2.

**Phosphate Rocks of South Carolina and the Great Carolina Marl Bed.**—With five colored illustrations—A popular and scientific view of their origin, geological position and age; also their chemical character and agricultural value; together with a history of their discovery and development. By Francis S. Holmes, A. M., of Charleston, S. C., late professor of geology, &c. Published by Holmes' Book House, Charleston, S. C. This is a very exhaustive treatise on the phosphate rocks of South Carolina, and to those interested in the subject a very desirable book. It contains analyses of the various guanos, fertilizers, marls, lime, &c., &c.

**Advertiser's Hand-Book.**—Comprising a complete list of all newspapers, periodicals and magazines published in the United States and British Possessions, arranged by counties, with the population of counties and towns; separate lists of the daily, religious and agricultural newspapers, and a history of the newspaper press. Published by S. M. Pettengill & Co., newspaper advertising agents, 37 Park Row, New York, which agency has been established since 1849. The design of this volume is to furnish in a handy, compact, and well arranged order, all periodicals issued in the United States and Territories, and British Possessions, that insert advertisements. So far as our section is concerned, we find the list full and correct, and would commend the book to all interested. Price \$3, elegantly printed and bound.

**New York Observer Year Book and Almanac.** Sidney E. Morse, Jr. & Co., New York, will publish on the first of January this valuable book, which they offer as a premium to every subscriber for 1871, to the *New York Observer*. It will contain an interesting history of almanacs; civil, commercial and agricultural information concerning all the governments in the world; a general summary of all the benevolent institutions and religious denominations in the world, with a complete ministerial directory of nearly every religious body in the United States; a complete list of all the colleges, theological seminaries, medical and law schools in the United States, &c. Price \$1.

**Scribner's Monthly.**—This is an illustrated magazine for the people. It teems with good reading and embellishments. It has already taken a high rank in the magazine world. Published by Scribner & Co., New York; conducted by J. G. Holland. Price \$3 per annum.

**Small Fruit Recorder.**—Received from A. M. Purdy, of Palmyra, N. Y., the numbers of the *Small Fruit Recorder and Cottage Gardener* for 1870, bound in a neat paper cover. We see it is offered, post paid, for only 50 cents. We notice the size of the *Recorder* is to be doubled this year, at \$1 per year. Send for a specimen copy.

**Arthur's Lady's Home Magazine**, for January, is on our table, and is really rich in good things, being profusely embellished. T. S. Arthur & Sons, Philadelphia. Price \$2 a year.

**The Children's Hour**, is a little gem, and mothers and fathers should take it for the little ones; it will do them good. T. S. Arthur & Sons, Philadelphia. Price \$1.25 a year.

**The Christian Index and Southwestern Baptist**, an excellent weekly religious and family paper, has just entered upon its fiftieth year. J. J. Toon, Atlanta, Ga., \$3 a year. Every Christian family should subscribe.

**The Scientific American.**—This splendid weekly begins a new volume this month; it is profusely illustrated with new and elegant engravings, relating to science, art, and mechanics. It is the best paper of its kind in the country. Address Munn & Co., New York. Price \$3 per year.

**The People's Literary Companion.**—The January number of *The People's Literary Companion* has been received. It presents a fine appearance, and, of course, is filled with all sorts of good things. Its enterprising publishers, Messrs E. C. Allen & Co., Augusta, Maine, appear determined to publish a paper that will please and benefit all. *The Companion* is always very handsomely illustrated. The price is very reasonable, indeed, only seventy five cents per year, and each new subscriber gets a fine steel engraving, representing the journey of life, from childhood to old age. It is published monthly.

**The Galaxy for 1871** promises even greater attractions than heretofore. One distinctive feature of *The Galaxy* is, the bright sharp way in which it is edited. Every subject of popular interest is at once seized upon and written up by the most competent person. It has gathered around itself a staff of the most popular writers in every department, and it is clear that every number is made up with the same unity of purpose and nice discernment of the public taste, which characterizes our most successful daily and weekly papers.

Among the attractions for the coming year, *The Galaxy* has engaged Porte Crayon to furnish a series of sketches of life and adventure, which will revive the old interest in his pictures of American scenes. Also Mrs. Edwards, Thurlow Weed, J. S. Black, Gideon Welles, the humorist Mark Twain, Richard Grant White, Justin McCarthy, Bayard Taylor, Ik. Marvel, Park Godwin, Dr. J. C. Draper, Carl Benson, Prof. J. M. Hart, and a list of other distinguished, eminent and popular writers.

The conductors of *The Galaxy* promise to make it even better and more attractive than it has heretofore been. No expense will be spared to secure articles of the greatest interest to its readers.

Those of our friends who desire to subscribe for a really valuable magazine, we would heartily commend *The Galaxy* as having no superior. January number begins a new volume. Address Sheldon & Co., 500 Broadway, New York. Subscription price \$4 per year.

¶ We regularly receive from the Leonard Scott Publishing Company the American reprints of the *Edinburgh Review*, *North British Review*, *London Quarterly*, and *Westminster Review*; also *Blackwood's Magazine*. These severally contain essays from the greatest writers in Europe, and are a library of themselves, and their cheapness brings them in the reach of people generally. We refer to their advertisement.

**Uses of Wines—In Health and Disease.**—By Francis E. Anstie, M. D. From the Baltimore News Company we have received a copy of this little book. It treats "On the place of Wines in the Diet of Ordinary Life," and "Wines in Disease," which have recently appeared in the "Practitioner." Published by J. S. Redfield, New York. Price 50 cents.

**Iowa: The Home for Immigrants.**—Being a treatise on the Resources of Iowa, and giving useful information with regard to that State, for the benefit of immigrants and others. Through A. R. Fulton, Esq., Secretary Iowa Board of Immigration, we have received a copy of this little book, which will be found highly interesting to those looking towards that State for settlement.

**Prize Essays—On Cooked and Cooking Food for Domestic Animals of the Farm;** with directions for using the Prindle Agricultural Steamer and Caldron. It contains three essays on the subject, in which the whole subject is thoroughly discussed, with other important information. Barrows, Savery & Co., (manufacturers of the Prindle Steamer,) Philadelphia. Send 10 cents and get a copy.

**Burke's Weekly—For Boys and Girls.**—Is an excellent paper for the young. John W. Burke & Co., Macon, Ga.; \$2 per year.



## THE MARYLAND FARMER.

**Old and New.**—This magazine is deservedly popular, and if you want a monthly visitor that you will hail with delight, why send \$4 to Roberts Brothers, publishers, Boston, and receive it for one year, and you will never regret it.

**The Christmas Locket**—and a charming Locket it is—is offered to the readers of *Old and New*, by its publishers, with their best wishes that they may have a merry Christmas and a happy New Year. It is beautiful in typography and rich in its literature. Roberts Brothers, Boston, publishers.

**Our Boys and Girls**—Oliver Optic's magazine.—The January number of this elegant monthly is received, and is really refreshing. Send for a number, only 25 cents; per year \$2.50. Lee & Shepard, Boston, Mass.

**Herald of Health**—A Journal of Physical Culture—advocates a higher type of manhood, physically, intellectually and morally, and well sustains the high character which it has held forth since the commencement of the new series. Wood & Holbrook, publishers, New York. Price \$2 a year.

**Rural Carolinian.**—One of our very best agricultural monthlies; published by Walker, Evans & Cogswell, and D. Wyatt Aiken, at Charleston, S. C., at the low price of \$2 a year, and worth double the amount.

**The Southern Magazine**—Begins the year under new auspices, having changed its name from *The New Eclectic Magazine*, and also changed proprietorship, the new firm being Murdoch, Browne & Hill. This monthly is ably conducted, and richly deserves the support of our Southern people. Published in Baltimore, at \$4 per annum.

**The United States Patent Laws**—Instructions how to obtain letters patent for new inventions, including a variety of useful information concerning the rules and practice of the Patent Office; how to sell patents; how to secure foreign patents, &c., &c. By Munn & Co., solicitors of patents, 37 Park Row, New York. This little book cannot but prove valuable to inventors and patentees.

**Illustrated Catalogue of Flowers and Vegetable Seeds.**—From Briggs & Bro., Rochester, New York, we have received a copy of their beautiful and complete catalogue, richly embellished, with brief directions for culture.

**Tilton's Journal of Horticulture**—Still maintains its standard of excellence. J. E. Tilton & Co., Boston; only \$1.50 per year.

**The Southern Cultivator**—The old Southern favorite, now in its 30th year, and still young and vigorous. The Southern planter and farmer can select no better monthly. Wm. & W. L. Jones, editors and proprietors, Athens, Ga.; \$2 per year.

**The American Sunday School Worker**—Will prove valuable to all engaged in Sunday schools, teeming with practical papers. J. W. McIntyre, St. Louis; terms \$1.50 per year.

**The American Agriculturist.**—This monthly is too well known throughout the country to need any commendation from us. It is finely printed, ably edited, and has the largest circulation of any agricultural monthly in this or any other country. Orange Judd presides over this colossus. O. Judd & Co., New York; \$1.50 per annum. They also publish the *Hearth and Home*, a weekly that has taken high rank among the agricultural and literary journals; \$3 per year.

**The Southern Farm and Home**—A first-class magazine of agriculture, manufacture and domestic economy, edited by Wm. M. Browne, and published by J. W. Burke & Co., Macon, Ga., should receive the support of our people, because it deserves it. Only \$2 a year.

**The Southern Planter and Farmer.**—Volume five of this monthly commences this month, with many improvements both in its typography and literature. It deserves the patronage of the public. Published by Ferguson & Rady, at Richmond, Va., at \$2 per year.

**Little Corporal**, for January, is received. It is small praise to say that this magazine has no superior and but few equals in the country, for children of all ages and for older people. It is illustrated; \$1.50 a year. Address Sewell & Miller, Chicago, Ill.

## Report of the Commissioner of Agriculture.

This compendium of the chief industry of the nation, containing 671 pages, appears late, owing to delays upon the part of Congress and the public printer. The labor of such a work is immense, and every subject of interest to the farmer, chemist, meteorologist, botanist, gardener, manufacturer, emigrant, mechanic, and almost every pursuit, is treated with a profuseness that displays the most ample knowledge of each subject. It is not in our power to give such selections as will enable our readers to appreciate the volume as it should be. Much of the experience of our own as well as other countries, in agriculture, is presented with clearness, and statistics are gathered to enable the farmer to decide the success of various crops in varying climates. At all times impressed with the necessity of this valuable report, we cannot too strongly urge upon our readers the procuring of a copy. As our country increases in those who are engaged in agricultural pursuits the demand for this report will be great, and we hope the department may always be presided over by a man of the same energy as Hon. Horace Capron, the present able Commissioner.

## Bedding Pansies.

Those who have never seen Pansies massed, have no idea of their great beauty. They are thorough wet weather plants, *i. e.*, they are not destroyed by wind or rain, as most bedding plants are; and not only that, but they are so easily grown. We planted last season about 7,000 different violas. One border, about 400 yards long and 24 feet wide, planted with pansies and cerastiums, and having a single row of pyramidal-shaped zonale geraniums in pots, at intervals of ten feet, was the admiration of every one who saw it.—*Cor. Gard. Magazine.*

**THE CAUSE OF RUST IN WHEAT.**—It is getting to be a pretty general opinion among farmers, says the Germantown Telegraph, that the sowing of grass seed—clover or timothy—with the wheat in the fall, as has been common in nearly every wheat-growing district here, as well as north and east of us, is the cause of the rust on wheat, by reason of the moisture which the grass retains affecting the grain-stalks when maturing. These grass-seeds, sown after the wheat crop has been harvested, will produce, it is claimed, as good crops the following year as if sown at the time of the wheat, nine months previously. We should like to hear from our farmers on this subject, as there is apparently two sides to it, and especially as it is one of decided importance.

Three things to think about—Life, death and eternity.



## THE MARYLAND FARMER.

### Melon Seeds from Asia Minor, and Water-Melon Seed from European Turkey.

Mr. A. Eutyichides, of Owings' Mills, Baltimore county, Md., who has for some time been engaged in importing Cashmere or Angora Goats, has lately imported a quantity of melon seed from Bay-Bazar, in Asia Minor, and water-melon seed from Andrianopolis, in European Turkey, both of which are celebrated for their fruit, and are believed to excel those raised in this country. He desires to distribute the same in small quantities, that they may be tested in this country, and with that view will send about one dozen of each kind, free, on receipt of an addressed envelope, with stamp for postage attached. Horticulturists will please take notice.

### Coleman's Fencing Machine.

A subscriber desires to know where one of these machines can be obtained, either new or second-hand. It was exhibited several years ago at one of the Maryland State Fairs, and at the Maryland Institute Exhibition. The machine was used for making *Pike or Paling Fence*, and well adapted for that purpose. It was manufactured by the Old Suffolk Machine Company of Baltimore. Information will be thankfully received by addressing the *Maryland Farmer*, Baltimore.

**NEW AGRICULTURAL HOUSE.**—L. H. Lee & Bro. have established a house in this city as the general agents for the World's Champion Reaping and Mowing Machine. They are located at 49 Light street. They are also agents for the *American Stock Journal*, and for the sale of live stock. We wish them success.

### New Advertisements.

J. J. Turner & Co.....	"Excelsior," and Ammoniated Bone Super-Phosphate.
The Tribune Co.....	Daily, Semi-Weekly and Weekly Tribune.
E. Whitman & Sons.....	Field and Garden Seeds.
Walton, Whann & Co.....	Whann's Super-Phosphate.
C. P. Sykes.....	Pomeroy's Democrat.
Henderson & Fleming.....	Gardening for Profit, &c
James Vick.....	Floral Guide for 1871.
Dr. H. Schröder.....	1,000,000 Grape Vines.
John Feast & Sons.....	New and Rare Plants.
C. C. Cooley.....	Paulonia Imperialis of Japan.
Jas. J. H. Gregory.....	Garden and Flower Seeds.
A. M. Purdy.....	Fruit Recorder, &c.
Bickford Spinner and Knitting Machine Co.....	Knitting Machines.
F. F. Holbrook & Co.....	Swivel Plow, Seed Drill, &c.
Geo. Frank Gourley.....	"The Free Mason."
Sidney E. Morse, Jr. & Co.	Observer Year Book.
Lee Shephard & Dillingham	Juvenile Books.
Geo. W. Gift.....	"Practical Planter."
H. N. F. Lewis.....	Treatise on Hedging.
T. H. Miner.....	New York Dollar Magazine.
R. H. Allen & Co.....	Improved Live Stock.
B. Sweet & Co.....	Employment for All.
Wm. P. Tonry.....	Analytical Chemist.
Chas. E. Coffin.....	Short Horn Stock.

Three things to delight in—Beauty, frankness and freedom,

## BALTIMORE MARKETS---Jan. 1.

[Unless when otherwise specified the prices are wholesale.]

<b>ASHES.</b> —Market steady at \$6.75@7.25 for Pot; Pearl \$8.75@9.25.	
<b>BEESEWAX.</b> —No material change to note since last quotations; 33@35 cts. per lb.	
<b>BROOM CORN.</b> —Dull market. Common Red 4@7 cts., as to quality.	
<b>COFFEE.</b> —Market firm in tone. Rio, fair to prime, 10½@12¾ cts.	
<b>COTTON.</b> —We quote Low Middling 14½ cts.; Good Ordinary 14@14½ cts., and Ordinary 13 cts.	
<b>FERTILIZERS.</b> —No change to note. We quote:	
Peruvian Guano—gold.....	\$68 ½ ton of 2000 lbs.
Orchilla and Rodonda.....	30 ½ ton "
Turner's Excelsior.....	65 ½ ton "
Turner's Ammo. S. Phos.....	55 ½ ton "
E. F. Coe's Ammo. S. Phos.....	55 ½ ton "
Ober's Phospho-Pernvian Guano	65 ½ ton "
Ober's Super-Phosphate of Lime..	55 ½ ton "
Soluble Pacific Guano.....	60 ½ ton "
Patapasco Guano.....	60 ½ ton "
Flour of Bone.....	60 ½ ton "
Andrew Coe's Super-phosphate..	60 ½ ton "
Baugh's Raw Bone S. Phos.....	52 ½ ton "
Magnum Bonum Soluble Phos...	56 ½ ton "
Ruth's "Challenge" Sol. Phos...	60 ½ ton "
Zell's Raw Bone Phosphate.....	56 ½ ton "
Rhodes' do.....	50 ½ ton "
Mapes' do.....	60 ½ ton "
Bone Dust.....	45 ½ ton "
Horner's Bone Dust.....	45 ½ ton "
Dissolved Bones.....	60 ½ ton "
Baynes' Fertilizer.....	40 ½ ton "
"A A" Mexican Guano.....	30 ½ ton "
"A" do.....	30 ½ ton "
Moro Phillips' Super-Phosphate..	56 ½ ton "
Whann's Raw Bone Super Phos...	56 ½ ton "
Md. Fertilizing & Manufacturing Co's Ammoniated Super-Phosphate	.55 ½ ton
Fine Ground Bone Phosphates	.30 ½ ton
Plaster.....	\$2.25 ½ bbl.
<b>FLOUR.</b> —Market firm.	
City Mills Family.....	\$9.75 @ 6.50
" Extra.....	6.00 @ 5.50
" Super.....	5.00 @ 5.50
Howard Street Family.....	6.75 @ 7.50
" Extra.....	6.25 @ 6.50
" Super.....	5.00 @ 5.50
Western Family.....	6.50 @ 7.50
" Extra.....	5.75 @ 6.50
" Super.....	5.00 @ 5.25
<b>GRAIN.</b> —Market active and firm. <i>Wheat</i> —Pennsylvania red \$1.40@1.47; prime Western red \$1.33; prime Virginia white \$1.70. <i>Rye</i> —Dull; prime \$1. <i>Corn</i> —Firm; white 80@82 cts.; yellow 75@76 cts. <i>Oats</i> —Firm; 55@55c.	
<b>MILL FEED.</b> —Brownstuff 15@18 cts.; Middlings 22@25 cts.; heavy 40@50 cts.	
<b>MOLASSES.</b> —Dull; New Orleans 65@75 cts.	
<b>PROVISIONS.</b> —Hams 16@18 cts.; Shoulders 12 cts.; Sides 12 cts.; clear do. 16@18 cts.	
<b>RICE.</b> —Dull; fair to good 6½@7½ cts.	
<b>SALT.</b> —Alum \$1.70@1.80; Fine \$2.80@2.90 per sack;	
Turk's Island 45@50 cts. per bushel.	
<b>SEEDS.</b> —Clover \$7.50@7.75; Timothy \$5.75@6; Flax \$1.90 per bushel.	
<b>SUGAR.</b> —Porto Rico 10@11 cts.; Cuba 10@10½ cts.; Demarara 11@11½ cts.	
<b>WHISKEY.</b> —92@92½ cts.	

MY FRIEND, stop that terrible cough if you would avoid a consumptive grave. This you can do by using Dr. Pierce's Alt. Ext. or Golden Medical Discovery. For curing all throat, bronchial and lung disease it has never been equalled. For palpitation or irregular action of the heart it is a never failing remedy.

If you suffer from "cold in the head," or Catarrh, use Dr. Sage's Catarrh Remedy. It cures when everything else fails.

A NEW BOOK.

CALDWELL'S  
TREATISE ON HEDGING.

A HISTORY OF HEDGING, giving a complete theory of its culture. The nature of the osage orange as a hedge plant for different soils and climates—economy to farmers—farmer's accounts, giving the laws in regard to hedging in different States.

The work contains about two hundred and fifty pages, on heavy paper, in new type, and is appropriately illustrated with numerous engravings. It has a general introduction, and treats of the following subjects under respective headings: The Great Value of Fencing; Waste Land of our Country; Economy and Protection; Cost; Climate; Protection of Crops; Failures; Cultivation; English Usage; How to Soak the Seed; How to Plant the Seed; Preparing the Ground; Resetting the Plant; Its culture the First year; Second year's Management; Third Year's Culture; How to Trim; Fourth year's Trimming and Culture; Checking the growth; Root Pruning; Orchard Grass and Kentucky Blue Grass Culture; Evergreens, how to set them and when to trim; Farmers' Accounts, how kept, etc., etc.

Price, \$2 00; sent by mail, postpaid.

H. N. F. LEWIS, Publisher,

113 Madison st., Chicago.

To any one sending us Four New Subscribers to the MARYLAND FARMER, at \$1.50 each, we will send a copy of this valuable Treatise, postage free.

NEW AND RARE PLANTS.

The subscribers would invite the attention of the public to their old and well known Establishment of forty years' standing. It now includes more GENUINE AND RARE PLANTS than any other in the country, and annually introducing all new Plants worthy of notice.

The collection of NEW EVERGREENS, cultivated in pots, direct from Japan, is not to be found in this country—having a large stock on hand, with everything mostly in the trade, at the lowest rate.

BOUQUETS and CUT FLOWERS to order.

Plants for Decorating Purposes, and Designs, with vases, put up in the best style.


N. B.—Grounds laid out and embellished in a modern style, on the most reasonable terms.

All orders punctually attended to by applying to

JOHN FEAST & SONS, Florists,

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BALTIMORE, MD.

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FOR SALE.



SHORT HORN BULLS, COWS AND HEIFERS, the get of Climax 5453, 4th Duke of Geneva 7931, Plantagenet 8795, Radical 8886, &c. Catalogues on application.

CHAS. E. COFFIN,

jan-3t Muirkirk, Prince George's Co., Md.

BARREL OF FLOUR FREE (\$7 cash)! for 20 subscribers to my great N. York DOLLAR MAGAZINE—got in one day—\$1.50 Engraving free to all! One year for five subscribers. Sample 10 cts—beautiful 25c. Engraving free! T. B. Miner, New Brunswick, N. Jersey. It

A VALUABLE BOOK.

THE

NEW YORK OBSERVER

YEAR BOOK

And ALMANAC,

TO BE ISSUED JANUARY 1st, 1871.

One of the most complete compends of important information which has ever been compiled in this country. It should be in every Library, as a Book of Reference.

It contains an interesting HISTORY OF ALMANACS; Civil, Commercial and Agricultural Information concerning all the Governments in the World; a General Summary of all the Benevolent Institutions and Religious Denominations in the World, with a complete Ministerial Directory of nearly every Religious Body in the United States, a complete List of all the Colleges, Theological Seminaries, Medical and Law Schools in the United States.

PRICE, ONE DOLLAR.

All persons subscribing and paying for the NEW YORK OBSERVER for one year (\$3), will receive a copy of this valuable work

GRATUITOUSLY.

Sample copies of the Observer sent free.

SIDNEY E. MORSE, JR. & CO.

37 Park Row, New York.

Mailed to any address, post-paid, on receipt of price. 1t

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FLORAL GUIDE FOR 1871.

The First Edition of One Hundred and Fifty Thousand copies of VICK'S ILLUSTRATED CATALOGUE OF SEEDS and FLORAL GUIDE, is published and ready to send out—100 pages, and an Engraving of almost every desirable Flower and Vegetable. It is elegantly printed on fine tinted paper, illustrated with Three Hundred fine Wood Engravings and Two beautiful

COLORS PLATES.

The most beautiful and the most instructive Floral Guide published. A GERMAN EDITION published, in all other respects similar to the English.

Sent free to all my customers of 1870, as rapidly as possible, without application. Sent to all others who order them for TEN CENTS, which is not half the cost. Address,

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

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
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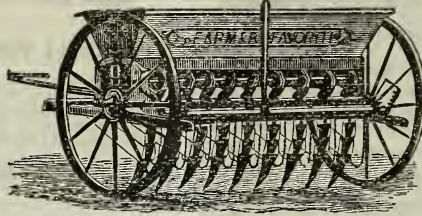
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
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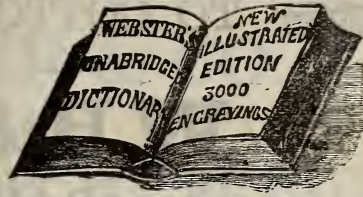
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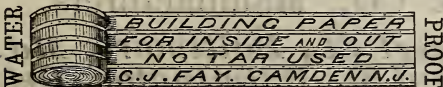
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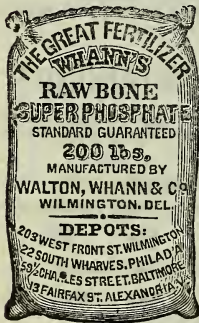
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
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## INTERESTING TO LADIES.

The following extracts are from the testimony, taken under oath, in a recent case pending before the United States Patent Office, upon the actual merits of the

### GROVER & BAKER SEWING MACHINE,

and its relative merits as compared with other machinés:

Mrs. Dr. McCready, says:

"I have used, for nine years, a GROVER & BAKER MACHINE, and upon it I have done all kinds of family sewing for the house, for my children and husband, besides a great deal of fancy work, as braiding, quilting, and embroidering. During all that time my machine has never needed repair, except when I had the tension altered, and it is as good now as it was the first day I bought it."

"I am acquainted with the work of all the principal machines, including Wheeler & Wilson's, Finkle & Lyon's, Wilcox & Gibb's, Ladd & Webster's, the Florence machines, and Sloat's machines, besides a number of ten-dollar ones; and I prefer the Grover & Baker to them all, because I consider the stitch more elastic. I have work now in the house that was done nine years ago, which is still good; and I have never found any of my friends who have used the other machines able to say the same thing

Mrs. Dr. Whiting gives the following reasons for the superiority of the Grover & Baker machines over all others:

"The elasticity of the stitch, and ripping when it is required; and also the stitch fastening itself, as you leave off; and also, the machine may be used for embroidering purposes; and therein consists the superiority over other machines.

"The stitch will not break when stretched, as the others do, and neither does it draw the work.

"I find this stitch will wear as long as the garments do—outwear the garments, in fact.

"I can use it from the thickest woolen cloth to Nansook muslin."

Mrs. Alice B. Whipple, wife of Rev. Mr. Whipple, Secretary of the American Missionary Association, testifies:

Q. As the result of your observation and experience, what machine do you think best as a general family instrument?

A. The Grover & Baker, decidedly.

Q. State the reasons, such of them as occur to you, for this opinion.

A. I think the stitch is a stronger stitch than that of any other machine I have used, and it seems to me much more simple in its management than other machines; one great advantage is the ease with which the seam is ripped when necessary to do so; and I think that the work, by an experienced person, on a Grover & Baker machine, is better than the work by such person on any other machine; it requires more skill to work other machines than the Grover & Baker.

Mrs. General Buel says she prefers the Grover & Baker machine over all others.

"On account of its durability of work, elasticity of stitch and strength of stitch. It never rips.

"It is preferred over all others; it is very easy in its movements, and very easily adjusted, and very simple in its construction.

"We can accomplish more in one week, by this sewing machine, than we can in a month by hand-sewing."

Mrs. Dr. Watts, says:

"I have had several years' experience with a Grover & Baker machine, which has given me great satisfaction. Its chief merit is that it makes a strong elastic

stitch; it is very easily kept in order, and worked without much fatigue, which I think is a very great recommendation. I am not very familiar with any other machine, except a Wheeler & Wilson, which I have had. I think the Grover and Baker machine is more easily managed, and less liable to get out of order. I prefer the Grover & Baker, decidedly."

Mrs. A. B. Spooner, says:

"I answer conscientiously, I believe it to be the best, all things considered, of any that I have known.

"In the first place, it is very simple and easily learned; the sewing from the ordinary spool is a great advantage; the stitch is entirely reliable. It does ordinary work beautifully, and the embroidery stitch. It is not liable to get out of order. It operates very easily. I suppose I can sum it all up by saying it is a perfect machine.

"I have had occasion to compare the work with that of other machines. The result was always favorable to the Grover & Baker machine."

Mrs. Dr. Andrews, testifies:

"I prefer it to all other machines I have known anything about, for the ease and simplicity with which it operates and is managed; for the perfect elasticity of the stitch; the ease with which the work can be ripped, if desired, and still retain its strength when the thread is cut, or accidentally broken; its adaptation to different kinds of work, from fine to coarse, without change of needle or tension."

Mrs. Maria J. Keane, of the house of Natalie, Tilman & Co., says:

"Our customers all prefer the Grover & Baker machine, for durability and beauty of stitch."

Mrs. Jennie C. Croly, ("Jenny June,") says:

"I prefer it to any machine. I like the Grover & Baker machine in the first place, because if I had any other I should still want a Grover & Baker; and, having a Grover & Baker, it answers the purpose of all the rest. It does a greater variety of work, and it is easier to learn than any other. I like the stitch because of its beauty and strength and because, although it can be taken out, it don't rip, not, even by cutting every other stitch."

The foregoing testimony establishes beyond question:

1. The great simplicity and ease of management of the Grover & Baker machines.

2. That they are not liable to get out of repair.

3. That a greater variety of work can be done with them than with other machines.


4. That the elasticity of the stitch causes the work to last longer, look neater, and wear better, than work done on other machines.

5. That the facility with which any part of the seam can be removed when desired is a great advantage.

6. That the seam will retain its strength even when cut or broken at intervals.

7. That, besides doing all varieties of work done by other sewing machines, these machines execute beautiful embroidery.

Over one hundred other witnesses in the case above referred to testified to the superiority of the Grover & Baker machines in the points named in substantially the same language, and thousands of letters have been received from parts of the world, stating all the same facts.

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
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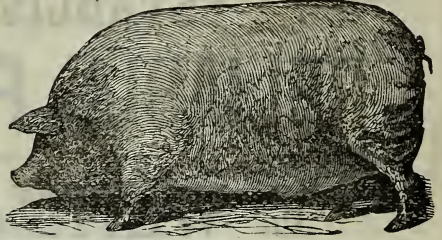
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
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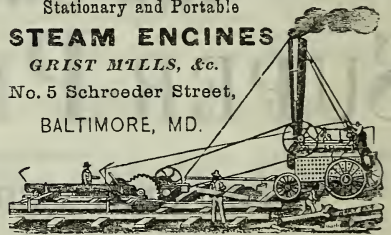
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

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